A Diachronic Syntax of Complex Predicate and Case Alternaion in Japanese

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A DIACHRONIC SYNTAX OF COMPLEX PREDICATE AND CASE CONVERSION IN JAPANESE

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Table of Contents

Chapter 1. Introduction

1. The Goal of this Thesis

This thesis is concerned with complex predicates and Case alternation in Japanese. A complex predicate is a predicate which consists of two or more predicative categories. More precisely, the term *complex predicate* is defined by Alsina, Bresnan and Sells (1997) in the following way.

(1) Complex predicates can be defined as predicates which are multi-headed; they are composed of more than one grammatical element (either morphemes or words) each of which contributes part of the information ordinarily associated with a head.

Some examples of Japanese complex predicates are illustrated in (1)-(3). In (2), two verbs *naguru* 'hit' and *aw* 'meet' compose a V-V compound. I will call the configuration V1-*aw* the *aw*-construction. In (3), two verbs *taberu* 'eat' and *iru* 'exist' is concatenated by the morpheme *te*. I will call the sequence *V1-te-V2* the V-*te*-V construction. Finally, in (4) *hazu* (should), *ga* (Nom) and *nai* (Neg) compose a single modal-like element. I will call this the *hazu-ga-nai* construction.

(2) John-to Bill-ga naguri-aw-ta.
John-and Bill-Nom hit-meet-Past
'John and Bill hit each other.'

(3) John-ga ringo-o tabe-te iru.
John-Nom apple eat-TE exist
'John is running.'

(4) John-ga kuru hazu-ga nai.
John-Nom come hazu-Nom Neg
'It cannot be the case that John will come.'

Furthermore, complex predicates of type (2) and (4) allow Case conversion. Case conversion is a phenomenon where two Case morphemes can freely alternate with each other, without any semantic change as in (5, 6).

(5) John-**ga/no** ku-ru hazu-ga nai.
John-Nom/Gen come hazu-Nom Neg
'It cannot be the case that Joh will come.'

(6) John-to Bill-ga otagai-**o/ni** naguri-aw-ta.
John-and Bill-Nom each.other-Acc/Dat hit-meet-Past
'John and Bill hit each other.'

In addition to the Case alternation phenomenon illustrated in (5, 6), this thesis will also deal with the licensability of Dative arguments in the V-*te*-V construction. Although *simaw* 'put away' in the non-V-*te*-V configuration in (7a) can occur with a Dative argument, it is not allowed in the V-*te*-V construction in (7b).

(7) a. John-ga tukue-**ni** hon-o simaw-ta.
John-Nom desk-Dat book-Acc put.away-Past
'John put away the book in the desk.'

b. John-ga (*tukue-ni) hon-o yon-de simat-ta.
John-Nom desk-Dat book-Acc read-TE put.away-Past
'John has finished reading the book.'

Japanese complex predicates have been long discussed in the framework of Generative Grammar as in Kageyama (1993), Matsumoto (1996) and Yumoto (2005) among others. These studies focus mainly on whether or not a complex predicate is a single word and whether V2 of a complex predicate is a lexical category or a functional category. However, not so much attention has been paid to the historical syntactic and semantic change of complex predicates.

On the other hand, in the field of *Kokugogaku* (Japanese Linguistics), there are many descriptive researches on complex predicates from a diachronic point of view as seen in Seki (1959), Kinsui (1983) and Aoki (2010) among others, and it is well known that some Japanese complex predicates have developed their usages through history. However, not so much attention has been paid to WHY such diachronic change has happened. The goal of this thesis is to make it clear how the usages of the complex predicates listed above have changed diachronically, and to show how the syntactic structures of the complex predicates have changed.

In what follows, based on an investigation on Japanese historical corpora, it will be shown that two types of syntactic change have occurred through history. The first one involves decategorization of the right-hand element of the complex predicate. The V-*te*-V construction and the *hazu-ga-nai* construction belong to this type. The other one involves

complication of the complement of V2. The *aw*-construction belongs to this type. In addition, it will be shown that there are two directions regarding Case conversion. On the one hand, some Case conversion phenomenon becomes more restricted in contemporary Japanese than in the past. On the other hand, some Case conversion phenomenon comes to be invoked more freely in contemporary Japanese. The Nominative/Genitive conversion in (5) belongs to the former, and the Dative/Accusative conversion belongs to the latter. I will show that the two directions regarding Case alternation follows from the two types of syntactic change in the complex predicates formation.

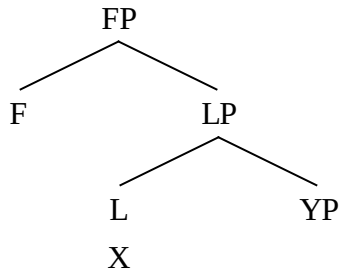
2. Theoretical Framework

2.1. Grammaticalization and Syntactic Constructionalization

In this thesis, in order to account for the diachronic change of the complex predicates, I will assume the essentials of current Minimalist Program by Chomsky (2000, 2001, 2004, 2005, 2008) modified by the cartography approach by Cinque (1994, 1999, 2002), Rizzi (1997) among others.

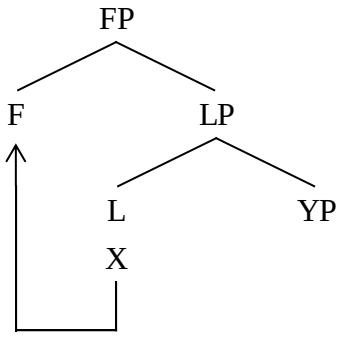
Diachronic language change has been dealt with from the perspective of grammaticalization. Since Meillet (1912), there have been many discussions on grammaticalization (cf. Lehmann (1911), Hopper and Traugott (1993), Robert and Roussou (1999, 2003)). Grammaticalization is an unidirectional language change in which a lexical item gradually loses its semantic content and becomes a functional category. In particular, Robert and Roussou (1999, 2003) attempt to capture the unidirectionality of grammaticalization within the Minimalist Program point of view. More precisely, Robert and Roussou reduce the unidirectionailty to the Economy of Merge over Move (Chomsky (1995)). Fist, a lexical item X is merged as a lexical head L.

(8)



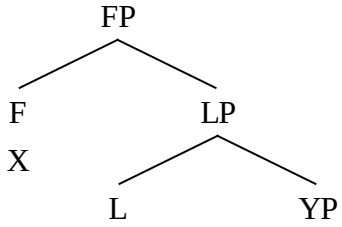
Then it loses its lexical content, acquires functional meaning, and becomes able to move to the functional head F.

(9)



Finally, X becomes able to be directly merged as a functional head.

(10)



This process is called *upward reanalysis.* This reanalysis involves the movement operation; hence, counter-directional change is not possible.

Roberts and Roussou show the historical change of the usage of some English modals as an instance of upward reanalysis. According to Roberts and Roussou, some English modals show some properties of lexical verbs. In (11a), *kunne* (*can* in contemporary English) occurred in its non-finite form. In (12), *wylle* (*will* in contemporary English) occurs

right adjacent to another modal *shall*.

(11) a. Non-finite modal:

but it sufficeth too hem **to kunne** her *Pater Noster, …*

but it suffices to them to know their *Pater Noster*

(?c1425(?c1400)*Loll. Serm.* 2.325; Denison (1993: 310))

b. Iteration of modals:

Who this booke **shall wylle** lerne …

he-who this book shall wish learn

(c1483 (?a1480) Caxton, *Dialogues* 3.37; Denison (*ibid.*))

Furthermore, in ME, lexical verbs can precede *not* as illustrated in (12). According to R&R, this word order occurs as the result of V-T movement of the lexical verb *gave*.

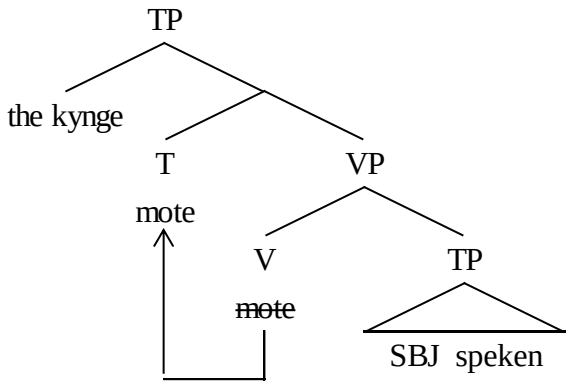
(12) if I gave not this accompt to you

if I gave not (=did't give) this account to you

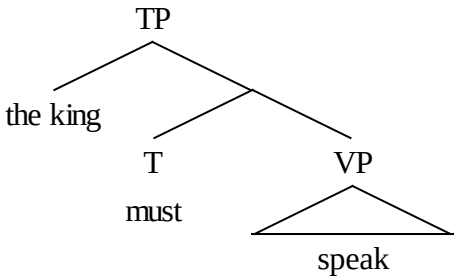
(1557: J. Cheke, Letter to Hoby; Görlach (1991:223), Roberts (1999:290))

Acoording to Roberts and Roussou, English modals had the bi-clausal structure, taking a non-finite complement clause, and the modal head-moves to T, as illustrated in (13). Then in contemporary English, the modal directly merges as T-head, taking a VP complement clause.

(13) The kynge mote speken.



(14) The king must speak.



In addition, I will assume the universal functional hierarchy proposed by Cinque (2006), and argue that a lexical category moves to any place among the functional heads in (15).

(15) $MoodP_{speech\ act}$ > $MoodP_{evaluative}$ > $MoodP_{evidential}$ > $ModP_{epistemic}$ > TP(Past) > TP(Future) > $MoodP_{irrealis}$ > $ModP_{alethic}$ > $AspP_{habitual}$ > $AspP_{repetitive(I)}$ > $AspP_{frequentative(I)}$ > $ModP_{volitional}$ > $AspP_{celerative(I)}$ > TP(Anterior) > $AspP_{terminative}$ > $AspP_{continuative}$ > $AspP_{retrospective}$ $AspP_{proximative}$ > $AspP_{durative}$ > $AspP_{generic/progressive}$ > $AspP_{prospective}$ > $ModP_{obligation}$ $ModP_{permission/ability}$ > $AspP_{Completive}$ > VoiceP > $AspP_{celerative(II)}$ > $AspP_{repetitive(II)}$ > $AspP_{frequentative(II)}$

Note that the upward reanalysis is a categorial change of a single lexical word.

Besides the upward reanalysis, it has been argued that there are some other types of

historical language change. Among them is the so-called constructionalization.

(16) Syntactic Construction

If a morphosyntactic constituent that dominates two or more morphemes (Y1, …, Yn, X) (n≧1, X = head) contains at least one variable Y_i, call it a *Syntactic Construction*. Y_i is qualified as a variable iff there are at least two candidates for substituting Y_i in combination with a particular head X. Ogawa (2014: 137))

(17) Syntactic Constructionalization

When a syntactic constituent, which was not a syntactic construction at the earliest stage, becomes a minimal syntactic construction (i.e. which contains only one variable and one categorizer) at a later stage, and comes to have more than one variable and/or functional categories than ever possible enlarges the size of its syntactic constituent, in a unidirectional fashion, call the diachronic process *Syntactin Constructionalization*.

(*ibid.*)

Ogawa shows the historical change of the resultative construction in English. With a transitive predicate, the resultative construction has the two different word orders as in (18). The direct object *the door* directly follows the verb *push* in (18a). On the other hand, the adjective *open* directly follows the verb.

(18) a. John pushed the door open

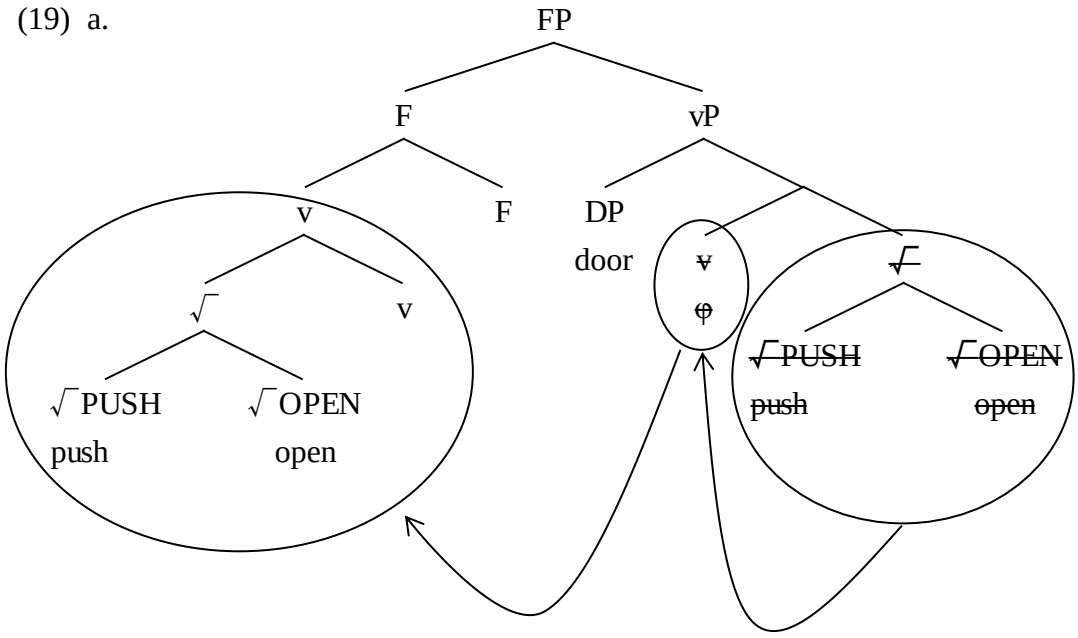
b. John pushed open the door. (Ogawa (2014: 139))

Based on the investigation of Corpus of Historical American English (COHA),

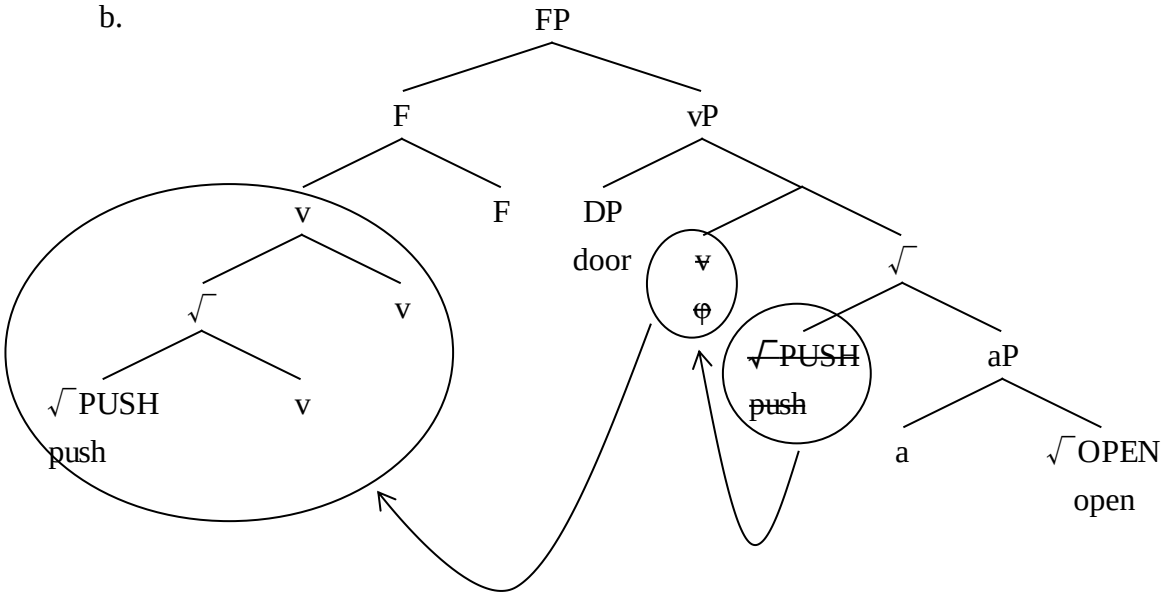
Ogawa shows that the word order of type (18b) occurs prior to the one of type (18a) in the history. In order to account for the fact, Ogawa argues that the word order in (18b) became possible by the historical syntactic constructionalization.

Now, consider the structure in (19). In (19a), √PUSH and √OPEN are directly merged and make a complex root. Then the complex root merged with the categorizer v, and the complex root head-moves to v to make the √+v complex head. Finally, the complex head further head-moves to the functional head F, resulting in the word order illustrated in (18b). The structure in (19b) is slightly different from (19a). In (19b), the two roots √PUSH and √OPEN are merged with two different categolizer, respectively; hence, they do not form a complex root. As the result, √PUSH on its own head-moves to v to F, resulting in the word order illustrated in (18a).

(19) a.



b.



So far, I have introduced the two types of grammaticalization, namely, upward reanalysis and syntactic constructionalization. The two notions are quite similar in that they both involve the complication of the complement of the head. The crucial difference between the two notions is whether or not they involve the categorial change of the syntactic head. As mentioned above, upward reanalysis is a categorial change of a lexical category to a functional category. The syntactic size of the complement of a head X becomes more complex as the result of the upward head-movement of X. On the other hand, syntactic constructionlalization does not involve such categorial change, and the complement of a head X becomes more complex without changing the category of X.[1]

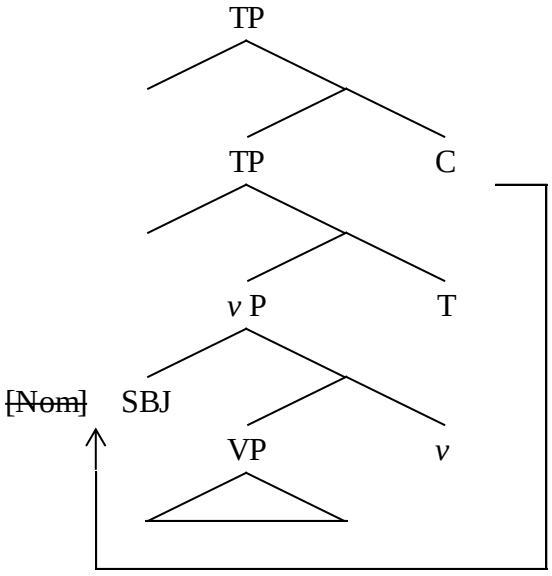
2.2. Case Theory

I adopt the probe-goal system of feature checking following the current Minimalist Program (Chomsky (2000, 2001, 2004, 2005, 2008)). In this system, C checks Nominative

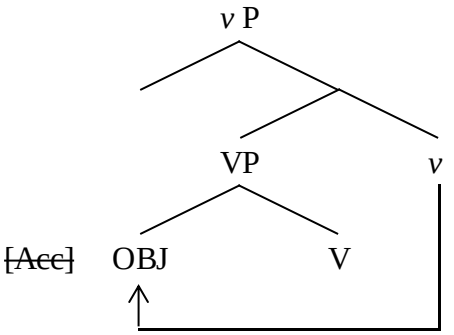
[1] Upward reanalysis and syntactic constructionalization are not in exclusive relation. For example, Ogawa (2014) argues that the historical structural change of a Japanese compound verb V-*kiru* '(lit.) V-cut' involves both the upward reanalysis and the syntactic constructionalization (see Ogawa (2014: 149) for the detailed discussion).

Case in its domain, and *v* checks Accusative Case in its domain.[2]

(20) Nominative Case



(21) Accusative Case



3. The Outline of this Thesis

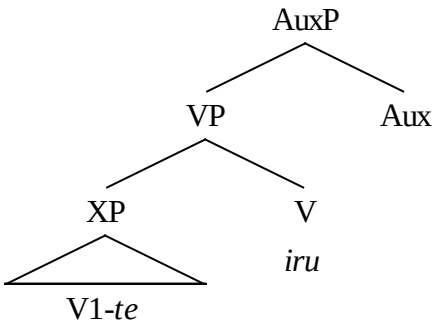
The first two chapters deal with the V-*te*-V construction and the *hazu-ga-nai* construction, respectively, which is accounted for in the perspective of upward reanalysis, and the last chapter deals with the *aw*-construction, which is accounted for in the perspective of

[2] Formal features on C and *v* are said to be inherited to T and V, respectively in Chomsky (2008) among others.

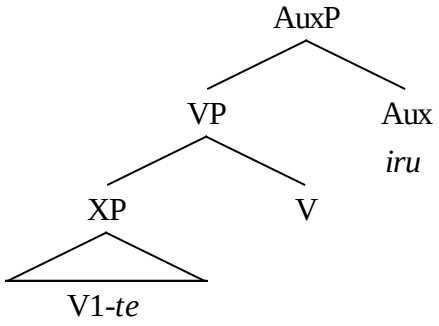
constructionalization.

Chapter 2 is concerned with the V-*te*-V construction. I will focus on the V-*te*-*iru* 'V-*te*-exist' construction, and show that the V2 *iru* has lost its lexical meaning and acquired a functional meaning diachronically. I will show that *iru* has undergone the following upward reanalysis.

(22) a.



b.



With the structure (22), the incompatibility with the Dative argument in (7) (repeated below as (23)) can be accounted for in the following way.

(23) a. John-ga tukue-**ni** hon-o simaw-ta.
John-Nom desk-Dat book-Acc put.away-Past
'John put away the book in the desk.'

b. John-ga (*tukue-ni) hon-o yon-de simaw-ta.
John-Nom desk-Dat book-Acc read-TE put.away-Past
'John has finished reading the book.'

Simaw in (23a) is a lexical verb; hence, it can license a Dative argument. *Simaw* in (23b), on the other hand, has auxiliarized, and lost its transitivity (cf. Nishiyama and Ogawa (2013, 2014)).

Section 3 deals with the *hazu-ga-nai* construction. *Hazu* allows a Genitive subject in its complement as in (24a). However, it is possible only in negative polarity sentences as the positive counterpart (24b) is ungrammatical.

(24) a. John-**ga/no** ku-ru hazu-ga nai.
John-Nom/Gen come hazu-Nom Neg
'It cannot be the case that Joh will come.'
b. John-**ga/*no** ku-ru hazu da.
John-Nom/Gen come hazu Cop
'It should be the case that John will come.'

It will be shown that Genitive subjects were possible in positive polarity sentences as well as negative polarity sentences around the late 1600s to 1950s. I will argue that *hazu* in positive polarity sentences were a lexical N head around the late 1600s to 1950, and Genitive subjects in the complement of *hazu* were licensed in the same way that they are licensed in nominal complement clauses in contemporary Japanese as in (25).

(25) [John-ga/no kaw-ta] hon
John-Nom/Gen buy-Past book
'the book which John bought.'

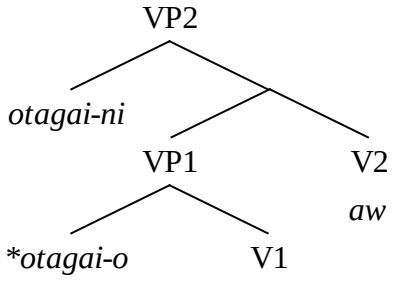
I will account for the unacceptability of the Genitive subject in (24b) by assuming that *hazu* in positive polarity sentences has been reanalyzed as a Modal head, and therefore has lost its ability to license Genitive subjects.

Chapter 4 deals with the *aw*-construction. In the *aw*-construction, *otagai* 'each other' can be marked either with Accusative Case or Dative Case.

(26) John-to Bill-ga otagai-**o/ni** naguri-aw-ta.
John-and Bill-Nom each.other-Acc/Dat hit-meet-Past
'John and Bill hit each other.'

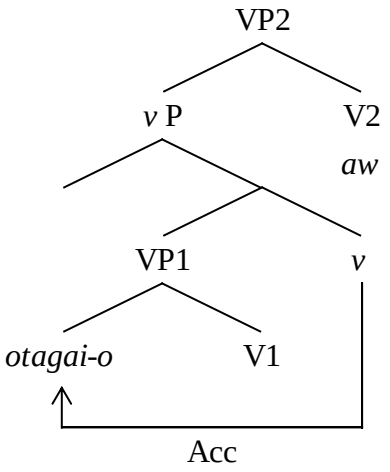
It will be shown that *otagai* co-occurring with Accusative Case was not seen in the Japanese literature until 1925, and only the one with Dative Case was allowed. I will account for this fact in terms of syntactic constructionalization. I assume that *otagai* was able to occur only in the configuration illustrated in (27). The structure in (27) does not project *v*P layer; hence, Accusative Case is not allowed.

(27)



Then, the structure (27) became more complex by syntactic constructionlization, projecting *v*P layer.

(28)



4. Summary

This chapter has shown the overall goal of this thesis and introduced the theoretical frameworks of this thesis. In what follows, two types of historical change regarding Case alternation phenomenon within complex-predicate constructions will be observed. On one hand, some Case alternation which was allowed in the past becomes unavailable in contemporary Japanese. On the other hand, some Case alternation which was not allowed in the past becomes available in contemporary Japanese. This thesis will argue that the two types of historical change regarding the possible Case pattern are related to two different types of structural change, namely, upward reanalysis and syntactic constructionalization.

Chapter 2. The V1-*te*-V2 Construction

1. Introduction: V2 with Lexical Meaning and Aspectual Meaning

In Japanese, two predicates, verb phrases or sentences can be coordinated by *te* as is illustrated below. This chapter is concerned with the examples where two predicates are coordinated as in (1a). I will call them the V-*te*-V construction, and I will call the left-hand verb V1 and right-hand verb V2.

(1) a. John-wa hon-o kat-te yon-da.
John-top book-acc buy-*te* read-past
'John bought and read the book.'

b. John-wa ringo-o tabe-te gakko-ni it-ta.
John-Top apple-Acc eat-te school-Dat go-Past
'John ate an apple and went to the school.'

c. John-wa ring-o tabe-te Bill-wa mikan-o tabe-ta.
John-Top apple-Acc eat-te Bill-Top orange-Acc eat-Past
'John ate an apple and Bill ate an orange.'

There have been two central issues regarding the V-*te*V construction: the semantics of V2, and the syntactic structure of this construction.

The first issue of the V-*te*-V construction is about the semantic variety of V2. When the verbs illustrated in (2) occur as V2 in the V-*te*-V construction, they sometimes lose their literal meaning and bear aspectual or modal interpretation as illustrated in (3).

(2) *aru* (exist (inanimate)), *iru* (exist (aminate)), *oku* (put), *simaw* (put away), *moraw* (be given), *ageru* (give), *iku* (go), *kuru* (come), *miru* (see)

(3) a. Hon-ga hirai-te ar-u.
book-Nom open-TE exist.Pres
'The book is left open.'

b. John-ga hasir-TE ir-u.
John-Nom run-Te exist.Pres
'John is running.'

c. John-wa syukudai-o owarase-te oi-ta
John-Top homework.Acc finish-Te put-Past
'John finished his homework.'

d. John-wa ringo-o tabe-te simaw-ta.
John-Top apple-Acc eat-Te put.away-Past
'John ate up an apple.'

e. John-wa Bill-ni Eigo-o osie-te moraw-ta.
John-Top Bill-Dat English-Acc teach-TE be.given-Past
'John was taught English from Bill.'

f. John-wa Bill-ni Eigo-o osie-te age-ta.
John-Top Bill-Dat English-Acc teach-TE give-Past
'John taught Bill English.'

g. Tukare-te ki-ta.
get.tired-TE come-Past
'I am getting tired.'

h. Sora-ga kuraku nar-te it-ta.
sky-Nom dark became-TE go-Past
The sky is getting darker.

i. John-wa ringo-o tabe-te mi-ta.
John-Top apple-Acc eat-TE see.Past
'John tried to eat an apple.'

As for the semantic variety of V2, there have been two major approaches in the literature, the grammaticalization approach (Shibantani (2007), Yoshida (2012) among others) and the non-grammaticalization approach (Nakatani (2013, 2015)). However, neither approach has been attested in diachronic perspective. The grammaticalizaition approach can give a natural account to the semantic variation of V2, while the non-grammaticalization approach needs to explain why semantic rules regulating the semantics of V2 has occurred if the non-literal meanings of V2 have occurred through history.

Citing some data from Japanese historical corpora, this section shows that the semantic variation of V2 has emerged in a diachronic process, and that possible types of V1 have been expanded as time went on. Based on this observation, this section shows how the structure of V-*te*-*simau/ageru* has been changed through history. More specifically, it is shown that the semantic variation of the construction in question follows from the historical categorial change of V2 from a lexical category to a functional category.

This chapter is composed in the following way. Frist, section 2 reviews previous analysis of the V-*te*-V construction. It will be shown that most of the analyses cited here are based on contemporary point of view and they need to be reconsidered in a historical point of view. Then, section 3 introduces Hatakeyama's (2015) work on the V-*te*-*iru* 'V-*te*-put' construction. It will be shown that V-*te*-*iru* has changed its meaning through history. More precisely, it

will be shown that the result state usage of V-*te*-*iru* occurred first, and the progressive aspect usage occurred after. Based on the observation in section 3, section 4 provides a syntactic analysis of the V-*te*-*iru* construction. More specifically, the historical development of the usage of the V-*te*-*iru* construction is accounted for from the perspective of the reanalysis of V2 to Aux. Section 5 extends the analysis of the V-*te*-*iru* to the other case of the V-*te*-V construction, namely, V-*te*-*simau* 'V-*te*-put.away.' Finally section 6 concludes the discussion.

2. Previous Analyses of the V1-*te*-V2 Construction

2.1. The Syntax of the V-*te*-V Construction

Previous studies of the V-*te*-V construction are concerned mainly with the complexity and simplicity of this construction. On the one hand, the V-*te*-V construction has a complex structure in that some particles can intervene between V-*te* and V2 as illustrated in (4).

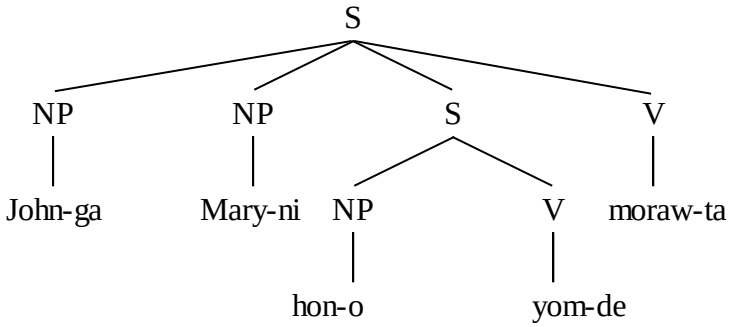
(4) John-wa Mary-ni hon-o yon-de-sae moraw-ta.
John-Top Mary-Dat book-Acc read-TE-even receive-Past
'John received form Mary the benefit of reading a book for him.'

On the other hand, the V-*te*-V construction has a simple structure in that Neg in the matrix clause can license NPI in the object position of V1 as in (5).

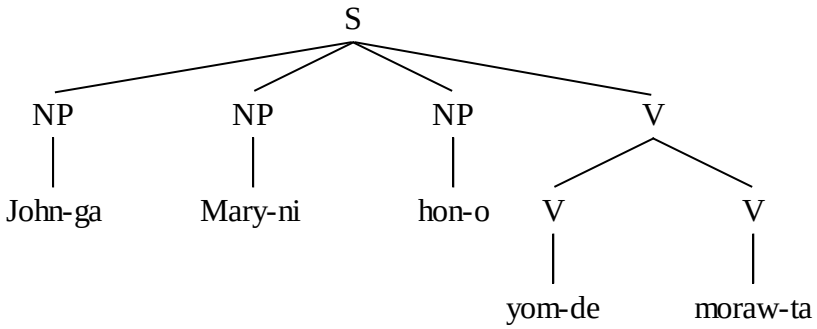
(5) John-wa Mary-ni nani-mo yon-de-sae moraw-nakat-ta.
John-Top Mary-Dat anything-Q read-TE-even receive-Neg-Past
'(lit.) John did not received form Mary the benefit of reading anything.'

Nakau (1973), Inoue (1976), Muraki (1978) and Shibatani (1978) attempt to capture the dual nature by a restructuring operation which derives the surface structure in (6b) form the deep structure in (6a). In (6a), the V-*te*-V sequence has a bi-clausal structure. After the restructuring operation (6b) arises, where the V-*te*-V consists a single word, and the whole sentence has a mono-clausal structure.

(6) a.

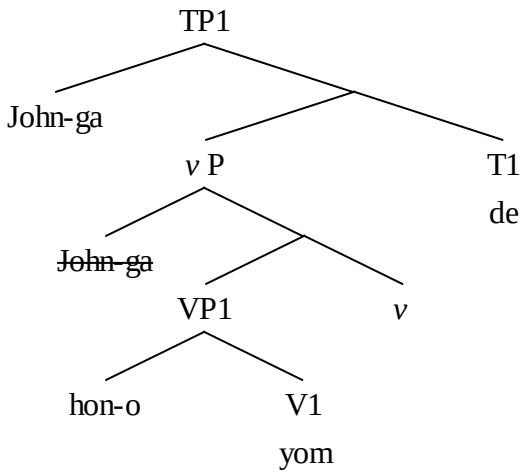


b.



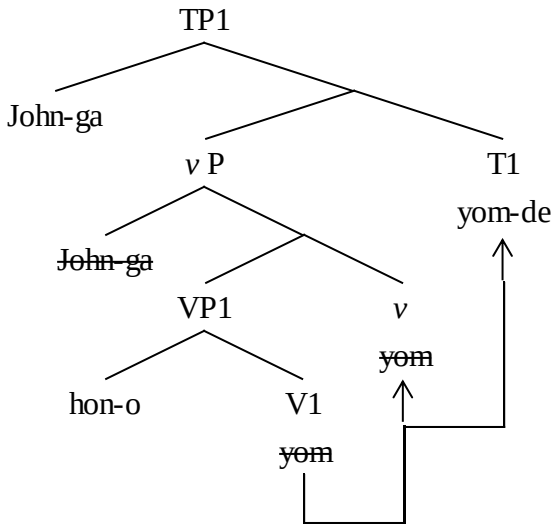
The restructuring operation is recaptured as a series of head-movement operation by Nakateni (2013, 2015). At first, V-*te* in the V-*te*-V construction projects its own TP as in (7).

(7)



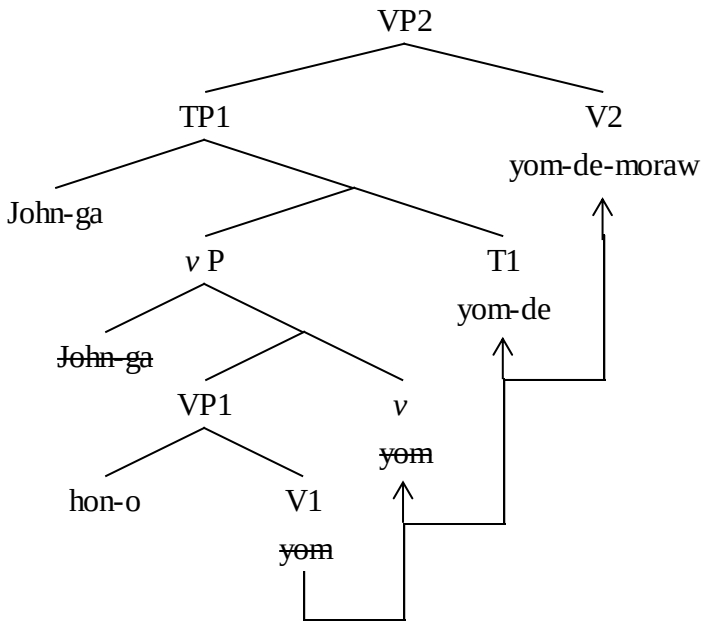
Then, V1 *yom* ‘read’ head-moves to *v* to T1, making a complex head *yon-de* ‘read-*te*,’ as in (8).

(8)



After that, V2 *morau* ‘receive’ is merged, and the complex head V1-*v*-T1 further head-moves to V2 resulting in a comlex head *yon-de-morau* ‘read-*te-receive*,’ as in (9).

(9)



Then, if possible, a Dative argument is merged. According to Nakatani, the dative argument is licensed by the newly created complex head, rather than V2.

Note that the restructuring in (6) and the head-movement in (7-12) are synchronic syntactic operations. Of course it may be possible to reconsider (7-12) are the path of the historical syntactic change. However, as is shown in section 3 that there is a tendency that the result state usage of V2 occurs prior to the progressive aspect usage. I will argue in section 4 that I need more articulated structure to account for such diachronic change.

Another approach is to treat V2 as a functional head, in line with Cinque's (2006) assumption that the so-called restructuring predicates are functional heads. Ogawa (2015) argues that V2 of the V-*te*-V construction is grammaticalized and occurs in any place of the functional sequence proposed by Cinque as in (10).

(10) $MoodP_{speech\ act}$ > $MoodP_{evaluative}$ > $MoodP_{evidential}$ > $ModP_{epistemic}$ > TP(Past) > TP(Future) > $MoodP_{irrealis}$ > $ModP_{alethic}$ > $AspP_{habitual}$ > $AspP_{repetitive(I)}$ > $AspP_{frustrative(I)}$ > $ModP_{volitional}$ > $AspP_{celerative(I)}$ > TP(Anterior) > $AspP_{terminative}$ > $AspP_{continuative}$ > $AspP_{retrospective}$ $AspP_{proximative}$ > $AspP_{durative}$ > $AspP_{generic/progressive}$ > $AspP_{prospective}$ > $ModP_{obligation}$ $ModP_{permission/ability}$ > $AspP_{Completive}$ > VoiceP > $AspP_{celerative(II)}$ > $AspP_{repetitive(II)}$ > $AspP_{frustrative(II)}$

Ogawa argues that V2 of V-*te*-*simau* (‘put away’) and V-*te*-*ageru* (‘give’) occur in $AspP_{frequentative}$ and $ModP_{volitional}$, respectively.

In section 3 I will show that such auxiriation took place in the history using Japanese historical corpora.

2.2. The Semantics of the V-*te*-V Construction

The other issue of the V-*te*-V construction is the semantics of V2. Recall that V2 in the V-*te*-V construction loses its literal meaning as illustrated in (11).

(11) a. Literal meaning

John-wa tukue-ni hon-o simaw-ta.

John-Top desk-Dat book-Acc put.away-Past

‘John put away the book in his desk.’

b. V-*te*-V Construction

John-wa hon-o yon-de simaw-ta.

John-Top book-Acc read-TE put.away-Past.

‘John finished reading the book.’

There have been two analyses to capture the semantic difference in (11a, b), the grammaticalization analysis and the non-grammaticalization analysis.

2.2.1. The Grammaticalization Analysis

Teramura (1984) and Shibatani (2007) among others argue the semantic difference in (11a, b) follows from their categorial difference. In particular, Shibatani argues that the non-literal meaning of V2 in the V-*te*-V construction results from a grammaticalization process.

In particular, Shibatani compares the following three instances of V-*te*-*kuru* 'V-*te*-come' and argues that they are in different stages of grammaticalization. To show this point, he shows that these three patterns show some differences with respect to *mieru* (a honorific form of *kuru* 'come') suppletion, *rassyaru* (another honorific form of *kuru*) truncation, fragment answer.

(12) Less grammaticalized

a. arui-te kuru
walk-TE come
b. hait-te kuru
enter-TE come
c. non-de kuru
drink-TE come

More grammaticalized

First, as shown in (13), *kuru* 'come' has a honorific form *mieru.* However, among *arui-te-kuru*, *hait-te-kuru* and *non-de-kuru*, only V2 of the first two can be replaced with

mieru as illustrated in (14).

(13) Yoru-ni naru-to, takusan-no kyaku-ga ku-ru/mie-ru rasii.
night-Dat become-when many-Gen customer-Nom come-Pres/come.Hon-Pres Evi
'I hear that many cunstomers come when night falls (speaking of a restaurant)'
(Shibatani (2007: 32))

(14) a. Yamada-sensei-wa gakkoo-ni arui-te ki-ta/mie-ta.
Yamada-Prof.-Top school-to walk-TE come-Past/come.Hon-Past
'Professor Yamada walked (walked come) to school.' (Shibatani (2007: 32))

b. Yamada-sensei-ga kyoositu-ni hait-te ki-ta/mie-ta toki …
Yamada-Prof.-Nom classroom-to enter-TE come-Past/come.Hon-Past when
'When Professor Yamada came into (enter come) the classroom…' (*ibid.*)

c. Yamada-sensei-wa ippai non-de ki-ta/*mie-ta.
Yamada-Prof.-Top a.drink drink-TE come-Past/come.Hon-Past
'Professor Yamada had a drink (and came).' (*ibid.*)

Shibatani argues that this contrast shows that *kuru* in (15a, b) is much more similar to the main verb usage of *kuru* than that in (15c).

Second, *kuru* has another honorific form *irassyaru*. Furthermore, *irassyaru* has a phonologically reduced form *rassyaru* as in (15).

(15) a. Yamada-sensei-wa gakko-ni arui-te ki-ta/irassyat-ta/rassyat-ta.
Yamada-Prof.-Top school-to walk-TE come-Past/come-Hon-Past
'Professor Yamada walked (walk come) to school.'

b. Yamada-sensei-ga kyoositu-ni hait-te ki-ta/irassyat-ta/rassyat-ta toki ...
Yamada-Prof.-Nom classroom-to enter-TE come-Past/come-Hon-Past when
'When Professor Yamada came into (enter come) the classroom...'

c. Yamada-sensei-wa ippai non-de ki-ta/irassyat-ta/rassyat-ta.
Yamada-Prof.-Top a.drink drink-TE come-Past/come-Hon-Past
'Professor Yamada had a drink (and come).'

Although the examples of *rassyaru* in (15) are all acceptable, Shibatani argues that *rassyaru* truncation in (15a) is least favored, and the one in (15c) is the most favored. Furthermore, the *rassyaru* truncation is not allowed with the main verb usage of *kuru* as illustrated in (16).

(16) Yamada-seseo-ga kyoositu-ni ki-ta/irassyat-ta/*rassyat-ta.
Yamada-Prof.-Nom classroom-to come-Past/come-Hon-Past.

This fact shows again that *kuru* in *arui-te-kuru* is more similar to the main verb usage of *kuru*.

Third, V-*te* in an ungrammaticalized construction can form a fragment answer to a yes-no question as in (17).

(17) a. Zitensya-ni not-te gakkoo-e ki-ta-no?
bicycle-to ride-TE school-to come-Past-Q
'(You've) come to school riding a bicycle?'

b. Un, zitensya-ni not-te.
yeah bicycle-to ride-TE
'Yeah, riding a bicycle.'

Now compare (18-23). The fragment answer in (18) is marginally accepted, whereas it is not allowed at all in (19, 23).

(18) a. Arui-te ki-ta-no?
Walk-TE come-Past-Q
'(You) came walking?'
b.*?Un, arui-te.
yeah walk-TE
'Yeah, by walking.'

(19) a. De-te ki-ta-no?
exit-TEcome-Past-Q
'(You) come out?'
b. *Un, de-te.
yeah exit-TE
'Yeah, (having) exit.'

(20) a. Ippai non-de ki-ta-no?
a.drink drink-TE come-Past-Q
'(You) had a drink (and came)?'
b. *Un, non-de.
yeah drink-TE
'Yeah, (having) drunk.'

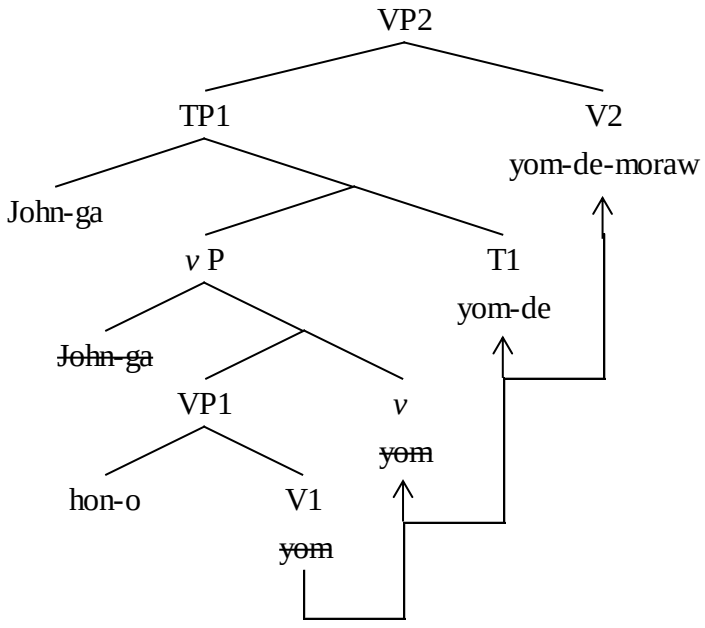
Based on the fact that *kuru* in *arui-te-kuru* is more like the main verb *kuru*, and *kuru* in

non-de-kuru is less like the main verb *kuru*, Shibatani argues that "[g]rammaticalization is facilitated in semantically less congruous environments. The combination of a manner verb *aruku* and a motion verb *kuru* is semantically less congruous; hence *kuru* in *arui-te-kuru* is less grammaticalized than *kuru* in (19) and (20).

2.2.2. The Non-grammaticalization Analysis

Nakatani (2013, 2015) argues that the semantic difference is not related to grammaticalization. He argues that the non-literal meaning of the V-*te*-V construction arises by a semantic rule which is applied in combination with the head-movement of V1. Recall that the V-*te*-V sequence constitute a complex head via head-movement of V1 to *v* to T1 to V2 as illustrated in (9) (repeated here as (21)).

(21)



Then, a semantic operation is applied to the complex head, resulting in something other than the sum of the semantics of V1 and V2. Nakatani argues against the grammaticalization approach, showing the following example. V2 in (22) does not have its literal meaning, but

the Dative argument can occur in the sentence.[3]

(22) Seito-tati-ga senbaduru-o tukue-no ue -ni ot-te it-ta.
student-Pl-Nom a.thousand .origami.cranes desk-Gen top-Dat fold-TE go-Past
'Students went on folding a thousand origami cranes on the desk.'
(Nakatani (2015: 101))

Notice that the Dative argument is not licensed by V1. The following example in (23) shows this point.

(23) John-ga (??tukue-no ue-ni) origami-o ot-ta.
John-Nom desk-Gen top-Dat origami-Acc fold-Past
'John folded a piece of origami.'

The acceptability of (22) is exactly what Nakatani's analysis expects, where the licensability of a Dative argument is determined by the V-*te*-V complex head as a whole.

Again, however, it is not quite sure how the historical fact regarding the V-*te*-V construction, which will be shown in the next section, is accounted for under the non-grammaticalization analysis.

So far, this section have briefly seen previous analyses of the V-*te*-V construction.

[3] Shibatani (2007) shows that V2 in the V-*te*-V construction loses its argument structure; hence, V2 is grammaticalized. See the following example.
(i) John-wa hon-o tukue-ni simat-ta.
John-Top book-Acc desk-Dat put.away-Past
'John put away the book in his desk.'
(ii) John-wa hon-o (*tukue-ni) yon-de simat-ta.
John-Top book-Acc desk-Dat read-TE put.away-Past
'John finished reading the book (*in his desk).'
The verb *simau* 'put away' as lexical verb can license a Dative argument as in (i). On the other hand, *simau* in the V-*te*-V construction cannot occur with a Dative argument as in (ii).

These approaches are mainly concerned with the complexity and the simplicity of the V-*te*-V sequence and the semantic variation of V2. They are mainly based on synchronic perspectives. However, in the field of *Kokugogaku* (Japanese Linguistics), it has been reported that the usage of the V-*te*-V construction has been changed through history.

What follows shows how the semantics of V2 and the restriction on V1 has been changed through history.

3. A Historical Perspective

3.1. Diachronic Semantic Change of V2: A View from V-*te-iru*

In the field of generative linguistics, not so much attention has been drawn to the semantics of V2 from a diachronic perspective. However, such historical research has been widely done in the field of *Kokugo-gaku* (Japanese Linguistics) by Kajii (1997), Kinsui (2006) and Hatakeyama (2015) among others. This section takes a close look at how the meaning of V-*te-iru* has developed through history. What follows focuses on the result state and progressive aspect usage of V-*te-iru*. What follows makes a brief review of Hatakeyama's (2015) work on diachronic semantic change of V-*te-iru* 'V-*te*-exist.'

Roughly speaking, V-*te-iru* in contemporary Japanese has four major meanings: result state, experience, iterative situation and progressive aspect as illustrated in (24-7).

(24) Result state/Perfect:

Tori-ga sin-de i-ru

Bird-Nom die-TE exist-Pres

'The bird is dead.' (Nakatani (2013: 39))

(25) Exprerientia:

Kare-wa san-kai taihos-are-te i-ru

He-Top three-times arrest-Psv-TE exist-Pres

'He has been arrested three times.' (*ibid.*: 40)

(26) Iterative:

Ooku-no hito-ga mainiti ue-de sin-de i-ru.

Many-Gen person-Nom every.day hunger-with die-Teexist-Pres

'Mary people are dying of hunger every day.' (*ibid.*)

(27) Progressive:

Tori-ga ton-de i-ru.

Bird-Nom fly-TE exist-Pres

'Birds are flying.' (*ibid.*)

According to Hatakeyama (2015) (see also Kinsui (2006)), the verb *iru* originally meant *to sit down* around the *Jodai* era (roughly around 7th to 9th cantury).

Then in the *Chuko* era (roughly around 9th to 13th century), *wi-tari* 'being in a sitting position' started to be used, and *wi-tari* started to occur as V2 in the V-*te*-V construction. However, *wi-tari* in the V-*te*-V construction in this period only has its literal meaning, and V-*te*-*wi*-*tari* as a whole indicates an attendant circumstance of an event expressed by V1 and a result state of sitting as illustrated in (28).

(28) itorautaku oboe-te kakinade-te wi-tari

cute think-TE stroke-TE sit-TARI

'He was sitting while he was stroking a cat.' (*Genji-monogatari*)

Hatakeyama further states that V1 in V-*te*-*wi*-*tari* was restricted to ones such as emotion verbs, sensory verbs and contact verbs as illustrated in (29) and that the subject of V-*te*-*wi*-*tari* was restricted to animate. According to Hatakeyama, in this period, 132 examples out of 136 examples of V-*te*-*wi*-*tari* can be construed as an attendant circumstance of V1 and *wi*-*tari*.

(29) *utinagamu* (look at), *naku* (cry), *utiwarau* (laugh), *unazuku* (nod), *kakinaderu* (stroke), *daku* (hold), *omou* (think)

In the *Chusei* era (roughly around 13th to 17th century), consumption verbs, verbs of appearance, motion verbs started to occur in V1 as in (30).

(30) … kore-o kui-te i-tari.

this eat-TE sit.TARI

Furthermore, some verbs which are incompatible with a sitting position started to occur as V1 in this period as illustrated in (31). According to Hatakeyama, in 76 examples out of 391, *wi*-*tari* cannot be construed as a sitting position.

(31) sono hito-o matu tote, utihaki nado si-te i-tari.

That person-Acc wait sweep such do-TE sit-TARI

In the *Kinsei* era (roughly around 17th to 19th century), *wi-tari* changed its form to *iru*. *Wi-tari* (*iru*) lost its meaning of being in a sitting position and started to be used as an existential verb. Furthermore, inanimate subject became possible in this period as illustrated in (32).

(32) Tume-ga ware-te i-ru.
Nail-Nom crack-TE exist-Pres
'Its nail cracked.'

According to Hatakeyama, the semantic change form sitting state to existence made V-*te-i-tari*/V-*te-iru* possible to indicate the result state of V1 or progressive aspect.
Summing up the historical change of V-*te-iru*, we get Table1.

Table 1: Historical Change of V-*te-iru*

	9th - 13th	13th - 17th	17th - 19th
form	V-*te-wi-tari*	V-*te-wi-tari*	V-*te-wi-tari/V-teiru*
meaning	attendant circumstance of V1 and sitting state	attendant circumstance of V1 and sitting state/existence	existence/result state/ progressive aspect
subject	animate	animate	animate/inanimate

3.2. The Result State Usage Occurred Frist

3.2.1. A View from Yamaga Dialect

Based on a research on Yamaga dialect spoken in Kumamoto Pref. in Japan, Hatakeyama (2015) also shows that the result state use of an existential verb occurs prior to the progressive aspect use. In Yamaga dialect, the form V1-*yoru* 'V1-exist' can indicate either the result state of V1 or progressive aspect of V1. Hatakeyama shows that these two usages of V-*yoru*

show some difference in their acceptability depending on the generation of speakers. He shows that although the result state use is accepted by both the twenties and the eighties, the progressive aspect usage is accepted only by eighties as illustrated in (33, 16).

(33) Twenties

Progressive Aspect: John esa tabe-yoru-mon.
John food eat-exist-SFP
'John is eating some food.'

Result State: *Koko-ni suwari-yoru-ken
Here-Dat sit-exist-SFP
'I am sitting here.'

(34) Eighties

Progressive Aspect: John esa tabe-yoru-mon.
John food eat-exist-SFP
'John is eating some food.'

Result State: Koko-ni suwari-yoru-ken
Here-Dat sit-exist-SFP
'I am sitting here.'

Furthermore, he shows that there is another aspectual V2 *toru* 'exist.' Unlike *yoru*, *toru* can only indicate the result state of V1 as in (35). Moreover, *toru* is accepted by both twenties and eighties.

(35) Koko-ni suwat-toru-ken

Here-Dat sit-exist-SFP

'I am sitting here.'

The distribution of aspectual V2 in Yamaga dialect is summarized in table 1.

Table 2: Distribution of progressive and perfective aspect markers in Yamaga dialect

	Progressive	Result state
Twenties	*-yoru*	**-yoru*/*-toru*
Eighties	*-yoru*	*-yoru*/*-toru*

He argues that the result state use *-yoru* occurs prior to the progressive aspect use, and the former is being declining as in (36) (and instead, *-toru* has started to be used as a result state marker).

(36) Result State -> Result State/Progressive Aspect -> *Result State/Progressive Aspect

3.2.2. A View from Northern Kyushu Dialect

Urushibara (2005) shows that although the same morpheme *te-iru* '*te*-exist' is used to indicate the progressive and perfective aspect of an event in the Tokyo dialect, the Northern Kyushu dialect has two different morphemes *you* and *tou* to indicate the progressive aspect and the perfective aspect, respectively.

(37) Tokyo dialect

a. John-ga (i)ima/(ii)sudeni hon-o yon-de-iru.

John-Nom now/already book-Acc read-TE-exist

(i) 'John is now reading a book.'

(ii) 'John has already read a book.'

b. John-ga (i)ima/(ii)sudeni ringo-o tabe-te-iru.

John-Nom now/already apple-Acc eat-TE-exist

(i) 'John is now eating an apple.'

(ii) 'John has already eaten an apple.'

c. John-ga (i)ima/(ii)sudeni ie-o tate-te-iru.

John-Nom now/already house-Acc build-TE-exist

(i) 'John is now building a house.'

(ii) 'John has already built a house.'

(38) Northern Kyushu dialect *you*

a. John-ga hon-o yomi-you.

John-Nom book-Acc read-YOU

'John is running.'

b. John-ga ringo-o tabe-you.

John-Nom apple-Acc eat-YOU

'John is eating an apple.'

c. John-ga ie-o tate-you.

John-Nom house-Acc build-YOU

'John is building a house.'

(39) Northern Kyushu dialect *tou*

a. John-ga hon-o yon-dou.
John-Nom book-Acc read-TOT
'John has read the book.'

b. John-ga ringo-o tabe-tou.
John-Nom apple-Acc eat-TOU
'John has eaten the apple.'

c. John-ga ie-o tate-tou.
John-Nom house-Acc build-TOU
'John has built the house.'

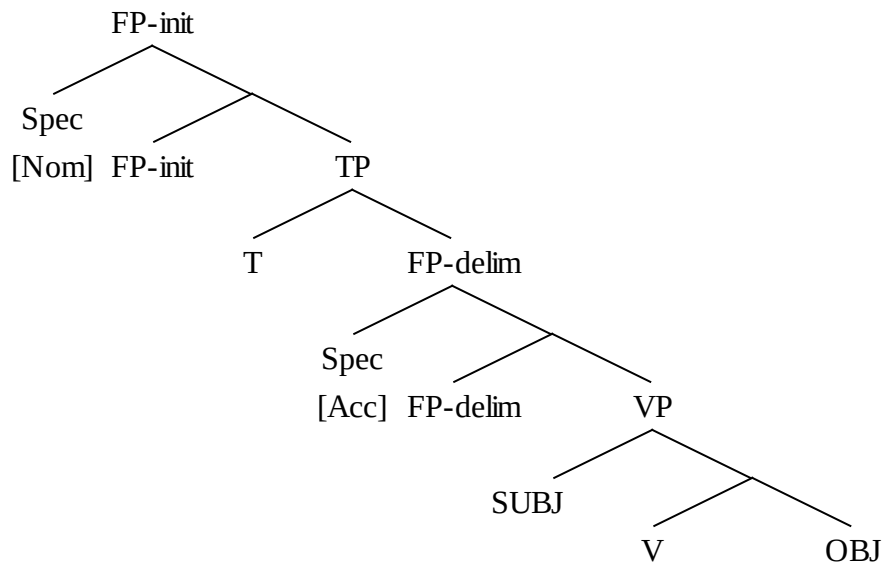
Furthermore, Urushibara shows that there is some difference with respect to the interpretation of *tou* depending on the generation of the speakers. Speakers in their late thirties and over interpret *tou* in (39) only as a perfective marker. On the other hand, speakers in their early thirties or fewer interpret *tou* either as a perfective marker and a progressive marker. This is summarized in table 3.

Table 3: Distribution of progressive and perfective aspect markers in Northern Kyushu dialect

		Progressive	Perfective
Tokyo dialect		*-te-iru*	*-te-iru*
Northern Kyushu dialect	Late thirties or over	*-you*	*-toru*
	Early thirties or fewer	*-you*/*-toru*	*-toru*

Urushibara accounts for this fact using the functional hierarchy by Ritter and Rosen (2000), where a progressive aspect marker occurs in F-init and a perfective aspect marker occurs in F-delim.

(40)



In Tokyo dialect, *te-iru* can occur either in FP-init and FP-delim. In the Northern Kyushu dialect, *-you* occurs as FP-init and *–toru* occurs as FP-delim. Furthermore, the progressive aspect usage of *–toru* becomes possible when *–toru* as F-delim head-moves to FP-init.[4] This view is supported by the fact that there are no speakers who use as *–you* as perfective marker.

To sum up, this section has reviewed Hatakeyama's (2015) work on V-*te*-*iru*, and has shown that the semantic variation of V-*te*-*iru* has developed through history. The diachronic semantic change can be straightforwardly accounted for given the grammaticalization approach of the V-*te*-V construction. The non-grammaticalization approach, on the other hand, needs some additional explanation as to why some semantic rules became available in a diachronic process. In what follows, it will be shown that the main verb *iru* has

[4] Although Urushibara does not use the term grammaticalization in her analysis, her idea is consistent with the current analysis.

decategorized to an auxiliary verb and acquired the aspectual meaning.

4. Analysis

4.1. Diachronic Auxiliation in English

Before turning to the analysis of V-*te*-*iru*, this section shows that a similar historical change is observed in English as well. Hopper and Traugott (1993), Bybee (2003) and Hosaka (2014) argue that the different usages of *be going to* in (41) show different levels of grammaticalization.

(41) a. She is going [to visit Bill].
b. She [is going to] visit Bill.
c. She [is going to] like Bill.
d. She [is gonna] like/visit Bill.

In (41a), *go* is used as a main verb which expresses the motion of the subject. In (41b), *is going to* is reanalyzed as an auxiliary verb which express the subject's will to the future event. Note that the predicate in the infinitival clause is restricted to motion verbs. Then, in (41), the non-motion verb *like* occurs in the infinitival clause. In this case, *is going to* expresses the speaker's guess to the future event. In (41), *going* and *to* are reanalyzed as a single word.

Hosaka (2014) shows that the usage of *be going to* has expanded through history. According to Hosaka, the main verb usage of *be going to* can be seen in Old English. Then, the first usage of (41b) occurred in the Middle English era.

(42) Thys onhappy sowle … was goying to be broughte into helle for the synne

(1442: Monk of Evesham (Arb.) 43)

Then, the first usage of (41c) occurred in the Modern English era.

(43) It seems if it were going to rain. (1890: Chamb. Jrnl. 14 June 370/2)

To capture the semantic change, Hosaka argues that *be going to* has undergone the following structural change.

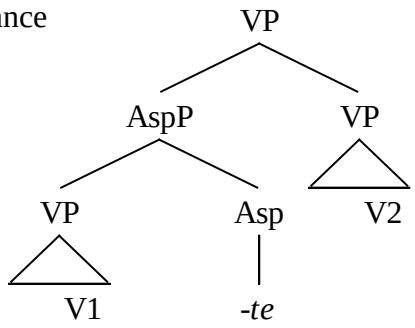
(44) $[_{VP}$ be going $[_{IP}$ to do]] > $[_{IP}[_{I'}[_{I}$ be going to$][_{VP}$ do]]]

4.2. The Syntax of the V-*te*-V-construction

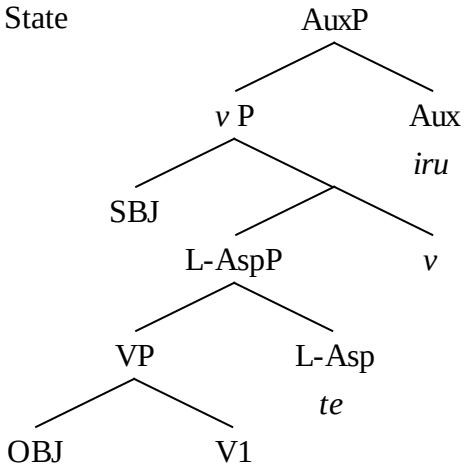
Based on the grammaticalization approach, this section shows how the structure of the V-*te*-V construction changed through history. Following Hosaka's (2014) analysis of *be going to* in English, I will account for the diachronic semantic change of the V-*te*-*iru* construction in the perspective of the auxiliarization of V2. It will be shown that *-te* occurs either as lower aspect or higher aspect (in Fukuda's (2012) sense), and V2 occurs as *v*, Aux or Mod[5]. I will also argue that the position of *te* is determined by the category of V2. If V2 is occurs as *v*, *te* can occur only as L-Asp, and if V2 occurs as Aux or Mod *te* can occur either as L-Asp or H-Asp. More precisely, I will argue that V-*te*-*iru* has followed the grammaticalization process illustrated below.

[5] See also Tamura (2015) for the idea to treat *te* as an aspectual head and V2 as auxiliary.

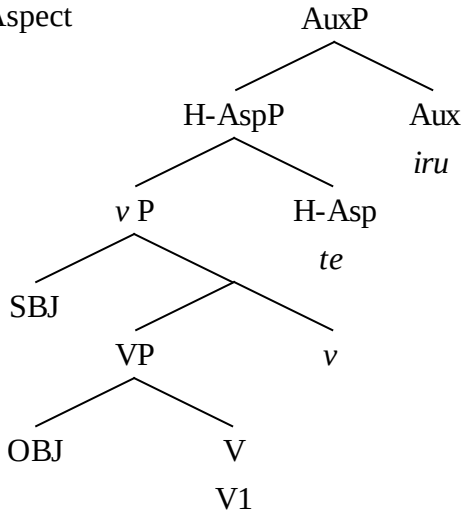
(45) a. Attendant Circumstance



b. Result State



c. Progressive Aspect



In (45a), V1-*te* occurs in an adjunct positon of V2, indicating an attendant circumstance. In (45b, c), *iru* is grammaticalized to a functional category, and V1-*te* occurs as the complement of *iru*, rather than an adjunct. *Te* occurs as L-Asp in (45b) and as H-Asp in (45c). The structures (45a) and (45b, c) are based on Uchimaru (2006) and Fukuda (2012), respectively.

I will have a brief review of their discussion in the following sections.

4.3. Assumptions

4.3.1. The Structure of the Non-Aspectual V-*te*-V construction

This section summarizes Uchimaru's (2006) idea that the attendant circumstance use of the V-*te*-V construction has an adjunction structure where AspP headed by *-te* adjoins to VP headed by V2.

It is widely known that when V2 in the V-*te*-V construction functions as a main verb and preserve its literal meaning, the form V-*te* has four major meanings: an attendant circumstance of V2 (46a), a prior event of V2 (46b), a reason or cause of V2 (46c) and coordinate conjunction with V2 (46d).

(46) a. Attendant Circumstance

Hanako-wa syagan-de e-o kai-ta.

Hanako-Top squat-te picture-Acc paint-Past

'Hanako painted a picture in a squatting position.'

b. Prior Event

Taro-wa whisky-o morat-te hitokuti non-da.

Taro-Top whisky-Acc get-te a.mouthful drink-Past

'Taro got whisky and drank a mouthful of it.'

c. Reason/Cause

Ane-wa kimotiwarugat-te sono okimono-o dokoka-e simat-ta.

sister-Top feel.bad-te that ornament-Acc somewhere-toput.away-Past

'Because my sister felt bad about the ornament, she put it away.'

d. Coordination

Miti-haba-ga semakunat-te miti-ga kyuu-ni nat-ta.

road-width-Nom narrow become-TE road-Nom steep-Dat become-Past

'The road got narrowed and the slope got steeper.'

(Uchimaru (2006: 1))

Uchimaru observes that there is a clear division between the attendant circumstance use and other three uses. The first difference can be observed in the so-called *sika-nai* construction. When *sika* is attached to V-*te*, only the attendant circumstance use in (46a) is grammatical, and other three in (46b-d) are ruled out.

(46) a. Attendant Circumstance

Hanako-wa syagan-de-sika e-o kaka-nakat-ta.

Hanako-Top squat-te-only picture-Acc paint-Neg-Past

'Hanako painted a picture only in a squatting position.'

b. Prior Event

*Taro-wa whisky-o morat-te-sika hitokuti noma-nakat-ta.

Taro-Top whisky-Acc get-te-only a.mouthful drink-Neg-Past

'(lit.) Taro drank a mouthful whiskey only after he is given it.'

c. Reason/Cause

*Ane-wa kimotiwarugat-te-sika sono okimono-o dokoka-e

sister-Top feel.bad-te-only that ornament-Acc somewhere-t

simawa-nakat-ta.

put.away-Neg-Past

'(lit.) My sister put the ornament away only because she felt bad about it'

d. Coordination

*Miti-haba-ga semakunat-te-sika miti-ga kyuu-ni
road-width-Nom narrow become-TE road-Nom steep-Dat
nara-nakat-ta.
become-Neg-Past
'(lit.) The road got narrowed only and the slope got steeper.'

(cf. Uchimaru (2006: 2))

Given that *sika* is licensed by a complex head V-Neg-T (see Matsui (2003) for detailed discussion), she argues that V-*te* adjoins to TP or VP, and (46b-d) have a different structure than (46a).[6]

The next question to be asked is whether the attendant circumstance use of V-*te* adjoins to TP or VP. In order to answer the question, Uchimaru shows further difference between the attendant circumstance use and other three uses. Uchimaru uses the focus marker *sae* 'even' to determine the position where V-*te* attaches to. Consider the following examples in (47).

---

[6] It is generally assumed that *sika* 'only' must be licensed in the domain of Neg. Matsumoto (2003), however, poses a problem to such analysis showing the following example (i).

(i) Taro-wa [Hanako-ga kuru mae] sika heya-o kataduke-nai.
Taro-Top Hanako-Nom kuru before only room-Acc clean-Neg.
'Taro cleans his room only before Hanako comes.' (Matsumoto (2003: 29))

(i) is problematic for the classical analysis since in (i) *sika* is attached as a TP adjunct which occurs outside the domain of Neg. Matsumono alternatively argue that *sika* must be licensed by a complex head formed by head movement of V to Neg to T. In fact, when a focus particle *mo* or *wa* occurs in between V and Neg the sentence becomes ungrammatical as in (ii).

(ii) *Taro-ga ringo-sika tabe-mo/wa si-nakat-ta.
Taro-Nom apple-only eat-Top do-Neg-Past

This is because the focus particle blocks the movement of V to Neg to T. See the difference between (iii), where no intervening element occurs in between V and Neg.

(iii) Taro-ga ringo-sika tabe-nakat-ta.
Taro-Nom apple-only eat-Neg-Past
'Taro eat only apples.'

In (iii) V can successfully move to Neg to T to make a complex head V-Neg-T, and the complex head licenses *sika*.

(47) a. Kiyomi-ga [$_{XP}$[$_{VP}$ ringo-o tabe] sae] si-ta.
Kiyomi-Nom apple-Acc eat even do-Past.
'Kiyomi even ate an apple.'

b. [Terebi-o mi nagara] benkyo-si sae si-ta.
TV-Acc watch while study-do even do-Past
'I even studied while watching TV.'

c. Kiyomi-wa [koohii mame-ga nakunara-nai kagiri] kaimono-ni iki-sae
Kiyomi-Top coffee bean-Nom run.out-Neg as.long.as shopping-Dat go-even
si-nai.
do-Neg
'Kiyomi doesn't even go shopping unless coffee beans run out.'

(Uchimaru (2006: 4) (See also Koizumi (1993)))

Sae can focalize any element inside its c-commanding domain; hence in (47a), either the object *ringo* 'apple,' the verb *tabe* 'eat' or the verb phrase *ringo-o tabe* 'eat an apple' can be focalized. Let us move onto (47b), where an adjunct *nagara* clause occurs. In (47b), any element in the *nagara* clause can be focalized by *sae*, showing that the *nagara* clause occur inside the domain of *sae*, namely VP. On the other hand, in (47c), where *kagiri* clause occurs as an adjunct, any elements in the *kagiri* clause cannot be focalized, showing that the *kagiri* clause adjoins outside the c-commanding domain of *sae*.

Now, consider the following examples, where *sae* is attached to V2 in the V-*te*-V construction.

(48) a. Attendant Circumstance

Hanako-wa syagan-de e-o kai-sae si-ta.

Hanako-Top squat-te picture-Acc paint-even do-Past

'Hanako even painted a picture in a squatting position.'

b. Prior Event

Taro-wa whisky-o morat-te hitokuti nomi-sae si-da.

Taro-Top whisky-Acc get-te a.mouthful drink-even do-Past

'Taro even drank a mouthful whisky after he got it.'

c. Reason/Cause

Ane-wa kimotiwarugat-te sono okimono-o dokoka-e

sister-Top feel.bad-te that ornament-Acc somewhere-to

simi-sae si-ta.

put.away-even do-Past

'Because my sister felt bad about the ornament, she even put it away.'

d. Coordination

Miti-haba-ga semakunat-te miti-ga kyuu-ni nari-sae si-ta.

road-width-Nom narrow become-TE road-Nom steep-Dat become-even do-Past

'The road got narrowed and the slope even got steeper.'

In (48a), any constituent inside the *te* clause can be focalized by *sae*. This fact shows that the attendant circumstance use of V-*te* adjoins to VP rather than TP. On the other hand, the *te* clauses in (48b-d) cannot be focalized; hence they do not occur inside VP but at TP.

Uchimaru argues that the prior event use, reason/cause use and the coordination use of V-*te* have a coordination structure, rather than an adjunction structure. This can be attested by pseudo-cleft sentences. First, the complex NP island effect is observed in pseudo-cleft

sentences, which shows that focalization in a pseudo-cleft sentence is a movement operation. Consider the following example (49). An argument NP can freely move to the focus position in (49b). On the other hand, moving an element from inside the relative clause to the focus position results in an ungrammatical sentence as exemplified in (49c).

(49) a. Sono kaisya-ga Mary-ni kono syorui-o mise-ta otoko-o kubi-ni
That company Mary-Dat this document-Acc show-Pst man-Acc fire-Dat
Si-ta.
Do-Past
'The company fired the man who showed the document to Mary.'

b. [Sono kaisya-ga t_i kubi-ni si-ta no]-wa [$_{NP}$ Mary-ni kono
that company-Nom fire-Dat do-Pastthat-Top Mary-Dat this
syorui-o mise-ta otoko]$_i$-o da.
document-Acc show-Past man-Acc Cop
'It is the man who showed the document to Mary that the company fired.'

c. *[Sono kaisya-ga [$_{NP}$ Maryu-nit_i miseta otoko]-o kubi-ni si-ta no]-wa
that company-Nom Mary-Dat show man-Acc fire-Dat do-Pastthat-Top
[$_{NP}$ kono syorui]$_i$ –o da.
this document-Acc Cop

Now, consider example (50, 24), where V-*te* is focalized in a pseudo-cleft sentence. The (a) examples are the original sentences, and the (b) sentences are the pseudo-cleft sentences.

(50) Attendant Circumstance

a. Hanako-wa syagan-de e-o kai-ta.

Hanako-Top squat-TE picture-Acc paint-Past

'Hanako painted a picture in a squatting position.'

b. [Hanako-ga e-o kaita no]-wa [syagan-de] da.

Hanako-Nom picture-Acc that-Top squat-TE Cop

'It is in a squatting position that Hanako painted the piture.'

(51) Prior Event

a. Hanako-wa untenmenkyo-o tot-te sono issyukan go-ni jiko-o

Hanako-Top driving.license-Acc get-TE that a.week later-Dat accident-Acc

okosi-ta.

cause-Past.

'Hanako caused a car accident a week after she got her driving license.'

b. *[Hanako-ga sono issyukan go-ni jiko-o okosi-ta no]-wa

Hanako-Nom that a.week later-Dat accident cause-Past that-Top

[untenmenkyo-o tot-te] da.

driving.license-Acc get-TE Cop

The attendant circumstance use of V-*te* can move to the focus position as in (50b), the prior event use of V-*te* becomes ungrammatical when V-*te* is focalized. Provided that the focalization in a pseudo-cleft sentence is a movement operation, the ungrammaticality of (51b) follows straightforwardly from a violation of the coordinate structure constraint in (52).

(52) The Coordinate Structure Constraint

In a coordinate structure, no conjunct may be moved, nor may any element contained in a conjunct be move out of that conjunct. (Ross (1967: 161))

The last question to be addressed is the category of *–te*. Uchimaru argues that *–te* in the attendant circumstance use is an aspect marker based on the fact that V-*te* in the attendant circumstance use always indicates perfective aspect or progressive aspect, and *–te* cannot take statives predicate as its complement. Uchimaru also argues that *–te* in the other usages is a conjunction marker since it can select stative predicates.

So far, this section have seen that the attendant use of the V-*te*-V construction has an adjunction structure where a phrase headed by *-te* adjoins to VP, and that the prior event use, reason/cause use and the coordination use has a coordination structure of two TPs.

3.1.2. The Notion of L-Asp and H-Asp

This section summarizes Fukuda's (2012) analysis of Japanese aspectual verbs. It will be shown that there are two positions for aspectual verbs to occur in a clauses, namely, High-Aspect (H-Asp) and Low-Aspect (L-Asp), and that H-Asp can take any event type (such as activity, iterative, achievement or accomplishment) whereas L-Asp can only take a telic event.

Fukuda observes that Japanese aspectual verbs *hajimeru* 'begin,' *tuzukeru* 'continue,' *oeru* 'finish' and *owaru* 'end' exhibit different syntactic behavior with respect to long passive, passivizability of their complement and selectional restrictions of event type of their complement (cf. also Kageyama (1993)).

The aspectual verbs listed above behave differently with respect to long passive. Consider the following example (53). Among the four aspectual verbs, only *owaru* cannot be

passivized.

(53) a. Kono hon-wa yomi-hajime/tsuzuke-rare-ta.
this book-Top read-begin/continue-Psv-Past
'This book began/continued to be read.'

b. *Sono hon-wa yooyaku kaki-owar-are-ta.
that book-Top finally write-end-Psv-Past
'(lit.) That book finally was done being read.'

c. Sono rombun-ga yomi-oe-rare-ta.
that paper-Nom read-finish-Psv-Past
'The paper finished being read.'

Next consider (54), where the complements of the aspectual verbs are passivized. Among them, only *oeru* in (54c) cannot take passivized complement.

(54) a. Mise-no garasu-wa booto-ni war-are -hajime/tuzuke-ta.
store-Gen glass-Top rioter-by break-Psv -begin/continue-Past
'The store windows began/continued to be broken by the rioters.'

b. Sono machi-ga koogekis-are-owat-ta.
that city -Nom attack -Psv -end-Pst
'That city was done being attacked.'

c. *Natsuko-to Tsuyoshi-no kutsu-ga migak-are -oe-ta.
Natsuko-and Tsuyoshi-Gen shoes-Nom polish-Psv -finish-Pst
'(lit.) Natsuko and Tsuyuoshi's shoes finished being polished.'

The last difference is about their selectional restrictions of event type. Although *hajimeru*, *tuzukeru* and *owaru* can take an activity event as its complement, *oeru* cannot.

(55) a. Kodomo-ga aruki-hajime/tsuzuke/owat-ta.
child-Nom walk-begin/continue/end-Past
'The child began/continued/was done walking.'

b. #Kodomo-ga aruki-oe-ta.
child-Nom walk-finish-Past
'(lit.) The child finished walking.'

Note, however, that when the activity verb *aruku* 'walk' in (55) has a clear end point, it can be the complement of *oeru* as in (56).

(56) Kodomo-ga sakamiti-o aruki-oe-ta.
child-Nom hill-Accc walk-finish-Past
'The child finished walking up the hill.'

The aspectual verbs in (55a) are also compatible with an accomplishment event.

(57) Kodomo-ga sakamiti-o aruki-hajime/tsuzuke/owat-ta.
child-Nom hill-Acc walk-begin/continue/end-Past
'The child began/continued/was done walking up the hill.'

So far, this section have observed that Japanese aspectual verbs exhibit syntactic difference with respect to long passive, passivizability of their complement and selectional restrictions of

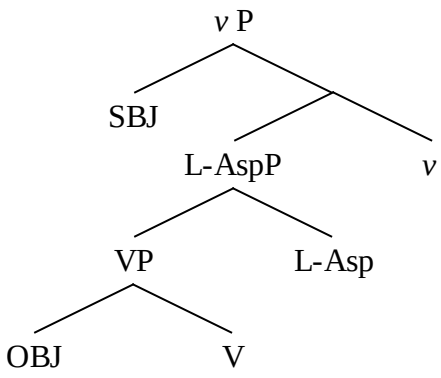
event type of their complement. These are summarized in Table 4 below.

Table 4: Syntactic operations on aspectual verbs

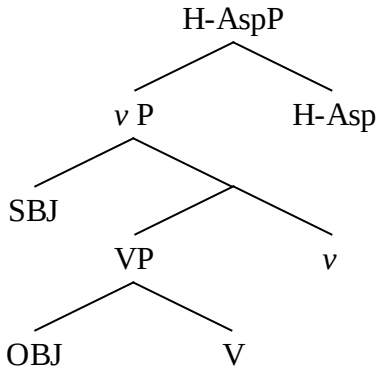
	hazimeru, tuzukeru	*oeru*	*owaru*
Long passive	√	√	*
Passive complement	√	*	√
Activity	√	*	√
Accomplishment	√	√	√

Fukuda argues that there are two aspectual heads in a clause and proposes the structure in (58) to account for the difference among the aspectual verbs.

(58)a.



b.



Let us start with the difference between *oeru* and *owaru*. Fukuda argues that *oeru* occurs as L-Asp, whereas *owaru* occurs as H-Asp.

Provided that the passive morpheme (*r*)*are* occurs as *v*, the fact regarding passivization can be accounted for in the following way. *Oeru* itself can be passivized since it is directly selected by *v*. *Oeru* cannot take a passive complement since its complement is VP rather

than *v*P. On the other hand, *owaru*, as H-Asp, occur above *v*P; hence it cannot be passivized while it can take a passive complement.

The fact that *oeru* cannot take an activity verb complement can be accounted for given that L-Asp must select telic event as its complement.

The fact that *hazimeru* and *tuzukeru* are compatible with long passive and passive complement shows that these aspectual verbs can occur either as L-Asp or H-Asp.

4.3.3. The Structure of V-*te-iru*

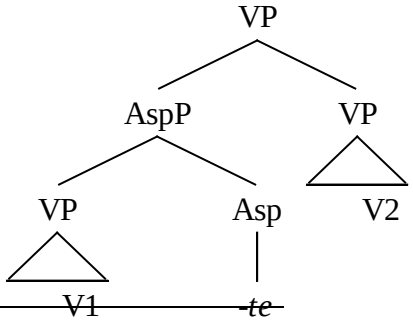
Now it is ready to discuss the structure of V-*te-iru*. Recall the process of the semantic change of V-*te-iru*, which is summarized in Tabel 5 repeated below.

Table 5: Historical Change of V-*te-iru*

	9th - 13th	13th - 17th	17th - 19th
form	V-*te-wi-tari*	V-*te-wi-tari*	V-*te-wi-tari/V-teiru*
meaning	attendant circumstance of V1 and sitting state	attendant circumstance of V1 and sitting state/existence	existence/result state/ progressive aspect
subject	animate	animate	animate/inanimate

I propose that V-*te-wi-tari* in 9th to 13th century has the structure (45a) (repeated here as (59)). This is the adjuction structure proposed by Uchimaru (2006), where AspP headed by –*te* adjoins to VP.[7]

(59)



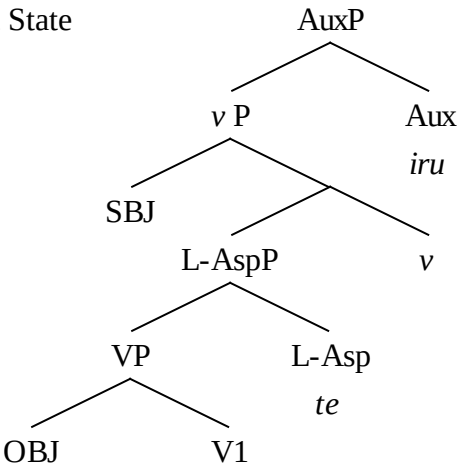
[7] I suppose here that AspP can either be L-Asp or H-Asp.

Then, around 13th to 17th century, *wi* starts to lose its role as a main verb and acquires the existential/aspectual meaning. I suppose that in this period, V-*te* starts to occur as a complement of *wi-tari*, rather than an adjunct. As for the aspectual usage of V-*te*-*wi*-*tari*/V-*te*-*iru*, I propose (45b) and (45c) (repeated here as (61) and (62), respectively). I suppose that the result state usage arises prior to the progressive aspect usage. Recall that in Yamaga dialect the existential verb *yoru* has developed in the following way.

(60) Result State -> Result State/Progressive Aspect -> *Result State/Progressive Aspect

Let us first consider (61). In (61), *-te* occur as L-Asp, which can select only accomplishment events. The result state interpretation arises in the following way: the result state of an accomplishment verb is depicted by L-Asp *–te*, and the continuation of the result state arises due to the existential meaning of *iru*.

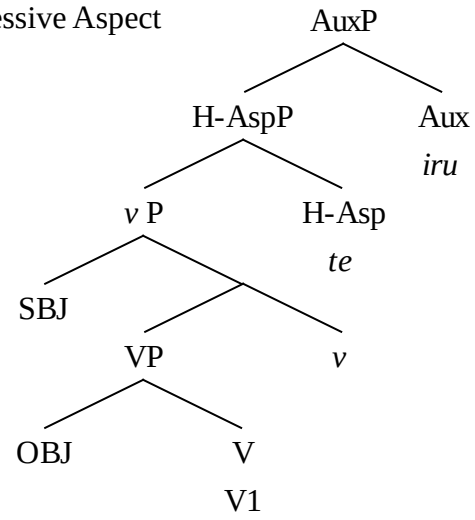
(61) Result State



Let us move onto the progressive aspect usage of V-*te*-*wi*-*tari*/V-*te*-*iru*. In (62), *-te*

occurs as H-Asp. Then, the progressive interpretation arises in the following way. H-Asp can select for any durative event, and due to the existential meaning of *iru*, the durative event is construed to be progressing.

(62) Progressive Aspect



5. Other Cases of the V-*te*-V Construction

In this section, I try to extend the analysis of V-*te*-*iru* to another type of V-*te*-V construction. Based on research on Japanese historical corpora, this section shows that almost the same analysis can be applied to V-*te*-*simau* 'V-*te*-put.away'.

5.1. The Data

The previoius section identified the first usages of the following V-*te*-V sequences.

(63) V-*te*-*oku* (put), V-*te*-*simau* (put away), V-*te*-*morau* (receive), V-*te*-*ageru* (give), V-*te*-*iku* (go), V-*te*-*kuru* (come)

The first examples of these cases are seen in the following literatures.

(64) a. V-*te-oku*, V-*te-iku*, V-*te-kuru*: 759, *Manyoshu*

b. V-*te-morau*: 1642, *Toraakira-bon*

c. V-*te-simau*: 1686, *Koshoku Ichidai Onna*

d. V-*te-ageru*: 1894, *Jogaku-zassi*

5.2. V-*te-simau*

The first usage of V-*te-simau* occurrd in 1686. At this period, only telic transitive verbs occur in V1.

(65) a. Koko-de kuu-te-simau
here-at eat-TE-put.away

b. Sake yori saki-ni siogai kuu-te-simau
alchol prior-Dat eat-TE-put.away

Then, in 1875, unaccusative verbs started to occur in V1.

(66) Watasi yot-te simat-te zengo boukyaku-ni nat-ta …
I get.drank put.away-TE back.and.front no.idea-Dat become-Past
'I got totally drank.' (1875: *Kaika Hyaku Monogatari*)

Then in 1894, unergative verbs started to occur in V1 as in (67). At the same period, passivization of V1 became available as in (68).

(67) Namake-te simau, Daijoji-he bakari it-tatte …

be.lazy-TE put.away Daijoji-to only go-even

'Even though you go only to Daijoji, you will get lazy.' (1894: *Jogakuzassi*)

(68) Inoti-ga osi kerya, sibar-are-te sima-e.

life-Nom dear if bind-Pass-TE put.away.Imp

'Get bound, if you want to be alive.' (1894: *Jogakuzassi*)

The diachronic change up to here is summarized in Table 6.

Table 6: Diachronic change of the type of V1

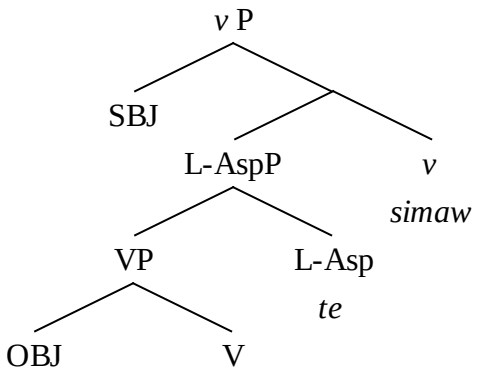
		1686	1791	1875	1895	1909	1925	1950
telic	transitive	3	2	0	18	60	75	79
	intransitive	0	0	1	8	58	88	80
atelic	transitive	0	0	0	3	20	37	26
	intransitive	0	0	0	4	31	25	36
passive		0	0	0	1	12	17	13

5.3. Analysis

This section gives a syntactic analysis to the diachronic data shown in the previous section.

Let me discuss the first usage of the V-*te*-*simau*, where a transitive telic verb is selected in V1. I suppose that *simau* occurs as *v* and selects L-AspP.

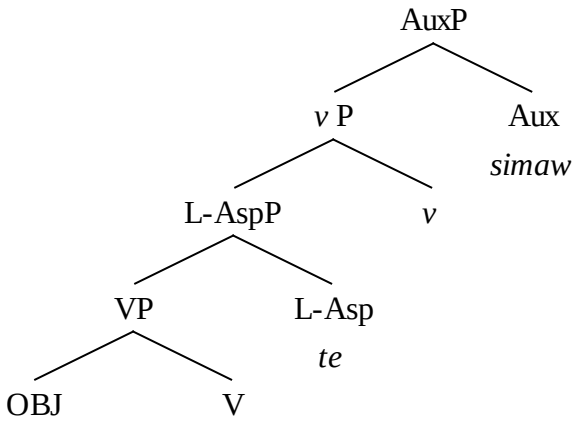
(69) Transitive telic V-*te*-*simau*



With *simau* as *v*, only L-AspP can be selected, and volitional subjects are also required.

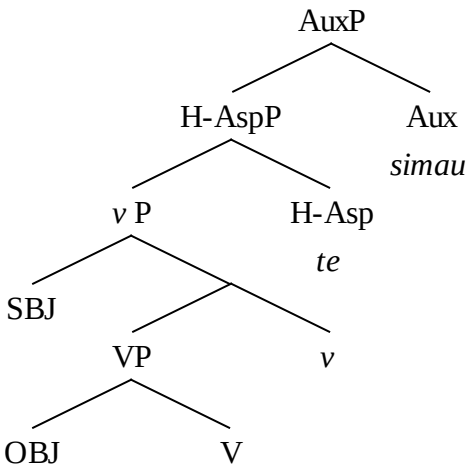
Then in 1875, when an unaccusative verb started to occur in V1, *simau* becomes an auxiliary verb; hence, volitional subjects are not required.

(70) Unaccusative V-*te*-*simau*



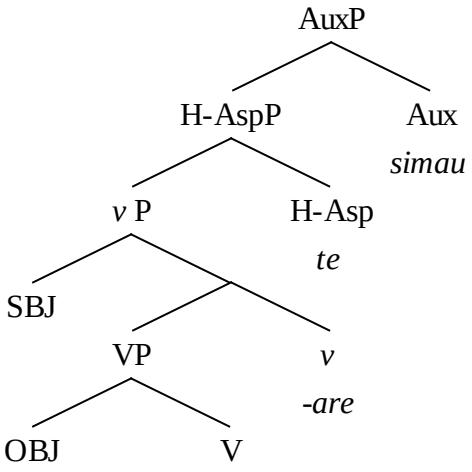
If *simau* is Aux, it is expected that either L-AspP or H-AspP can occur in the complement of *simau*. In fact, in 1895, unergative verbs started to occur in V1. This structure is shown in (71).

(71) Unergative V-*te*-*simau*



Furthermore, the fact that the first usage of passivization on V1 occurred in the same year can be naturally accounted for, since H-Asp selects *v*P as shown in (72).

(72) Passivized V1-*te*-*simau*



6. Summary

This chapter has dealt with the V-*te*-V construction. I have shown that the semantics of V-*te*-*iru* has changed diachronically. This chapter has also seen there is a tendency that V2 acquires the result state meaning prior to the progressive aspectual meaning. I have shown that those facts naturally follow from Fukuda's aspectual hierarchy and the upward

reanalysis approach of grammaticalization.

Cpahter3. Genitive Subjects Occurring in the Complement of Formal Nouns

1. Introduction: *Hazu* with/without Genitive Subjects

This chapter is concerned with a Case alternation phenomenon called Nominative-Genitive Conversion (NGC). In Japanese, although the subject of a matrix clause cannot be marked for Genitive as in (1), the subject can be marked either for Nominative or Genitive Case when occurring in certain embedded environments such as nominal complements illustrated in (2).

(1) Matrix clause

John-ga/*no ki-ta.

John-Nom/*Gen come-Past

'John came.'

(2) Nominal complement

[John-ga/no kaw-ta] hon

John-Nom/Gen buy-Past book

'the book which John bought'

The Genitive subject of type (2) has been analyzed in various ways in the literature since Harada (1971). As for what licenses the Genitive subject, there have been three major analyses. First, Miyagawa (1993, 2011), Ochi (1999), Maki and Uchibori (2008) among others argue that the Genitive Case is relevant to the external D element as in (3). I will call this the D-licensing approach.

(3) [$_{NP}$ [$_{CP}$[$_{TP}$ John-no kat-ta] C] hon] D]

Gen

Second, Watanabe (1996) and Hiraiwa (2001) among others argue that C in certain environments is relevant to the Genitive Case marking as in (4).[8] I will call this the C-licensing approach.

(4) [$_{NP}$ [$_{CP}$[$_{TP}$ John-no kat-ta] C] hon] D]

Gen

Third, Kobayashi (2013a, 2013b), unlike the other two approaches, argues that the realization of a case feature is determined by the anti-realization conditions illustrated below in (5). I will call this the anti-realization analysis.

(5) Anti-realization conditions on unmarked cases

a. An unvalued case feature on *n* cannot be realized as *–ga* in a [-Tense] domain.

b. An unvalued case feature on *n* cannot be realized as *–no* in a [+Tense] domain.

(Kobayashi (2013: 54))

This chapter is concerned with a different type of Genitive subject which occurs in a particular construction illustrated in (6). Let us call the sentence like (6) the *hazu-ga-nai* construction, where the formal noun *hazu* is marked Nominative and is followed by Neg.

[8] Watanabe (1996) argues that C in the contexts where wh-agreement appears is relevant to the Genitive Case marking, and Hiraiwa (2001) argues that C which makes an attributive form of a predicate is relevant to the Genitive Case marking.

(6) John-ga/?no kur-u hazu-ga na-i.

John-Nom/Gen come-Pres should-Nom Neg-Pres

'It cannot be the case that John will come.'

The Genitive subject of type (6) differs from the one of type (2) in the following perspectives:

(7) a. Genitive case is licensed in a negative polarity environment.

b. Genitive case is licensed only with an unaccusative predicate.

The first property (7a) comes from the following fact: Genitive subjects of type (2) can be licensed irrespective of whether they occur in a negative polarity environment or a positive polarity environment as in (8) whereas Genitive subjects of type (6) can be licensed only in a negative polarity environment as shown in (8b).

(8) a. John-wa [[Bill-no kaw-ta] hon]-o (i)sir-teiru/(ii)sir-ana-i.

John-Top Bill-Gen buy-Past book-Acc know-Pres/know-Neg-Pres

(i) 'John knows the book which Bill bought.'

(ii) 'John doesn't know the book which Bill bought.'

b. John-ga/no kur-u hazu (i)*da/(ii)-ga na-i.

John-Nom/Gen come-Pres hazu Cop/ -Nom Neg-Pres

(i) '(lit.) It cannot be the case that John will come.'

(ii) 'It cannot be the case that John will come.'

Let us move onto the second property (7b). This property comes from the following fact. Genitive subjects of type (2) can be licensed irrespective of the type of the predicate. Consider the following examples.

(9) a. Subject of a transitive verb

[John-ga/no kaw-ta] hon

John-Nom/Gen buy-Past book

'the book which John bought'

b. Subject of an unaccusative verb

[John-ga/no ki-ta] toki

John-Nom/Gen come-Past time

'the time when John came'

c. Subject of an unergative verb

[John-ga/no waraw-ta] toki

John-Nom/Gen smile-Past time

'the time when John smiled'

d. Object of a stative verb

[John-ga eigo-ga/no hanas-eru] riyuu

John-Nom English-Nom/Gen speak-can reason

'the reason John can speak English'

Genitive subject of type (6), on the other hand, can be licensed only if the predicate is unaccusative. See the contrast illustrated in (10).

(10) a. Subject of an unaccusative verb

John-ga/no ku-ru hazu-ga nai.

John-Nom/Gen come should-Nom Neg

'It cannot be the case that John will come.'

b. Subject of an unergative verb

John-ga/*no hasir-u hazu-ga nai.

John-Nom/Gen run should-Nom Neg

'It cannot be the case that John will run.'

c. Subject of a transitive verb

John-ga/*no hon-o yom-uhazu-ga nai.

John-Non/Gen book-Acc read should-Nom Neg

'It cannot be the case that John will read the book.'

d. Object of a stative verb

John-ga eigo-ga/*no hanas-eru hazu-ga nai.

John-Nom English-Nom/Gen speak-can should-Nom Neg

'It cannot be the case that John can speak English.'

The property (7b) is quite similar to what Miyagawa (2012a, 2013) calls Genitive of dependent tense (GODT). Miyagawa shows that in a temporal adjunct *toki* 'time' clause, the subject of a sentence can be marked for Genitive only if the predicate is an unnacusative verb or a passivized transitive verb as in (11).

(11) a. Subject of an unaccusative verb

[[John-ga/no ki-ta] toki], boku-wa tonari-no heya-ni i-ta.

John-Nom/Gen come-Past time I-Top next-Gen room-Dat be-Past

'I was in the next room when John came.

b. Subject of a passivized transitive verb

[[John-ga/no nagur-are-ta] toki],boku-wa tonari-no heya-ni

John-Nom/Gen slap-Psv-Past time I-Top next-Nom room-Dat

i-ta.

be-Past

'I was in the next room when John was slapped.'

c.. Subject of an unergative verb

[[John-ga/*no waraw-ta] toki], boku-wa tonari-no heya-ni

John-Nom/Gen smile-Past time I-Top next-Nom room-Dat

i-ta.

be-Past

'I was in the next room when John smiled.'

d. Subject of a transitive verb

[[John-ga/*no Bill-o nagur-ta] toki],boku-wa tonari-no heya-ni

John-Nom/Gen Bill-Acc slap-Past time I-Top next-Nom room-Dat

i-ta.

be-Past

'I was in the next room when John slapped Bill.'

Miyagawa argues that there exist a special type of Genitive which is licensed by a combination of Dependent-T and weak *v*, besides the one of type (6), which, according to him, is licensed by D.

However, the Genitive subject of type (6) is different from GODT in that it is not compatible with a passivized transitive predicate as illustrated in (12).

(12) John-ga/*no nagur-areru hazu-ga nai.
John-Nom/Gen hit-Psv hazu-Nom Neg
'It cannot be the case that John will be slapped.'

Therefore, it seems that the Genitive subject of type (6) seems to be licensed in a different way than that of the genitive subjects in nominal complement clauses and GODT.

Furthermore, I will show that *hazu* was used differently in the late 1600s and it has changed its usage through history. More specifically, it will be shown that unlike contemporary Japanese, Genitive subjects were able to occur in positive polarity sentences as well as negative polarity sentences like in (13).

(13) inakamono-no me-ni mo kore-wa gaten-no yuka-nu hazu
countryman-Gen eye-Dat toothis-Top understand-Gen can-Neg hazu
nari.
Cop
'This cannot be understandable for countrymen, too.'

(1686: *Koshoku Ichidai Onnna*)

The goal of this chapter is to show how the Genitive in (7) is licensed, and to show how the usage of *hazu* has developed through history in a syntactic way.

This chapter proceeds in the following way: first, Section 2 reviews previous analyses of Genitive subjects and the *hazu-ga-nai* construction, and points out their potential problems. Section 3 provides a descriptive generalization of the *hazu-ga-nai* construction in contemporary Japanese. Then, Section 4 provides a syntactic analysis of the *hazu-ga-nai* construction. Then, Section 5 shows how the historical change of the *hazu-ga-nai*

construction, and shows how the structure of *hazu-ga-nai* construction has changed. Finally, Section 6 concludes the discussion.

2. Previous Studies

2.1. Previous Studies of NGC

NGC in Japanese has long been discussed in the literature since Harada (1971). The central issue of Japanese NGC has been what category licenses Genitive Case. There have been three major approaches. Miyagawa (1993, 2011), Ochi (1999) and Maki and Uchibori (2008) among others claim that it is D that licenses Genitive subjects (the D-licensing approach). Watanabe (1996), Hiraiwa (2001, 2002) and Kosuge (2015) among others claim that it is C that licenses the Genitive subjects (the C-licensing approach). Kobayashi (2012) and Miyagawa (2012a) argue that a specific type of T, a defective T, is relevant to the licensing of Genitive subjects. This section makes a brief review of the previous analyses and shows that none of them can account for the nature of the Genitive in the *hazu-ga-nai* construction.

2.1.1. The D-licensing Approach

Miyagawa (1993) observes that the Nominative subject and the Genitive subject show different scope interactions with the head noun. For example, (14a), where the subject is marked Nominative, allows only the narrow scope reading of the subject with respect to the head noun *kanoosee* ‘probability.’ On the other hand, (14b), where the subject is marked Genitive, is ambiguous, allowing both wide and narrow scope reading of the subject.

(14) a. [[[rubii-ka sinzyu]-ga yasuku-naru] kanoosee]-ga 50% izyoo da.
ruby-or pearl-Nom cheap-become probability-Nom 50% over is
i. 'The probability that rubies or pearl become cheap is over 50%.'
ii.*'The probability that rubies become cheap or the probability that
pearls become cheap is over 50%.'
probability>[ruby or pearl]; *[ruby or pearl]>probability

b. [[[rubii-ka sinzy]-no yasuku-naru] kanoosee]-ga 50% izyoo da.
ruby-or pearl-Gen cheap-become probability-Nom 50% over is
i. 'The probability that rubies or pearl become cheap is over 50%.'
ii. 'The probability that rubies become cheap or the probability that
pearls become cheap is over 50%.'
probability>[ruby or pearl]; [ruby or pearl]>probability

(Maki and Uchibori (2008: 195))

Miyagawa argues that the wide scope reading is possible in (14b) because the Genitive subject is licensed in a syntactically higher position than that of the Nominative subject, namely, Spec, DP. See the difference between the Nominative subject and the Genitive subject in (15). In (15a), the subject is assigned Nominative Case in its base position, whereas in (15b), the subject rises to Spec, DP to be assigned Genitive Case.

(15) a. $[_{DP}\,[_{NP}\,[_{CP}\,[_{TP}$[ruby or perl]-Nom predicate]] probability] D]

b. $[_{DP}$[ruby or perl]-Gen$_i$ $[_{NP}\,[_{CP}[_{TP}\,t_i$ predicate]] probability] D]

Given the structure in (15), the difference illustrated in (14) can be explained in the following way: In (14a), the subject stays in the nominal complement; hence only the narrow scope

reading is possible. On the other hand, (14b) is ambiguous because the subject can be interpreted either in the base position or in Spec, DP. When the subject is interpreted inside the nominal complement, the narrow scope reading arises, and when the subject is interpreted in Spec, DP, the wide scope reading arises.

2.1.2. The C-licensing Approach

Hiraiwa (2001, 2002) argue against the D-licensing approach by showing a vast range examples of Genitive subjects occurring in clauses which are not headed by nouns as illustrated in (16-19).[9]

(16) John-wa [ame-ga/no yam-u made] office-ni i-ta.
John-top rain-Nom/Gen stop-Pres until office-at be-Past
'John was at his office until the rain stopped.' (Hiraiwa 2002: 547)

(17) [Boku-ga/no omo-u ni] John-wa Mary-ga suki-ni-tigaina-i.
I-Nom/Gen think-Press Dat John-Top Mary-Nom like-Dat-must-Pres
'I think that John likes Mary.' (*ibid.*)

[9] Maki and Uchibori (2008) argue that the Genitive subjects are licensed by D even in clauses which are seemingly not headed by nouns. Notice that overt nouns can occur as the head of those clauses as illustrated in (i) and (ii).
(i) John-wa [ame-ga/no yam-u**toki** made] office-ni i-ta
John-Top rain-Nom/Gen stop time until office-Datbe-Past
'John was at his office until the rain stopped.' (cf. 14)
(ii) Konoatari-wa [hi-ga/no kure-ru **no** nitsure] hiekondeku-ru.
here around-Top sun-Nom/GEN go.down-PRES NO as get.colder-PRES
'It gets chillier as the sun goes down around here.' (cf. 17)
Maki and Uchibori argue that even in (14-20), there are covert head nouns which are relevant to Genitive Case marking.

(18) [Sengetsu ikkai denwa-ga/no at-ta kiri] John-kara nanimo renraku-ga nai
last.month once call-Nom/Gen be-Past since John-from any call-Nom Neg
'There has been no call from John since he called me up once last month.' (*ibid.*)

(19) Kono atari-wa [hi-ga/no kure-ru nitsure(te)] hiekondeku-ru.
here around-top sun-Nom/Gengo.down-Pres as get.colder-Pres
'It gets chillier as the sun goes down around here.' (*ibid.*)

(20) John-wa [toki-ga/no tat-u to tomoni] Mary-no koto-o wasurete-it-ta.
John-Top time-Nom/Genpass-Pres with as Mary-Gen FN-Acc forget-go-Past
'Mary slipped out of John's memory as times went by.' (*ibid.*)

(21) [John-ga/no ku-ru to ko-na-i to] dewaootigai
John-Nom/Gen come-Press and come-Neg-Pres and top great.difference
da.
Cpl-Pres
'It makes a great difference whether John comes or not.' (*ibid.*)

(22) John-wa [Mary-ga/no yon-da yori] takusan-no hon-o yon-da.
John-Top Mary-Nom/Gen read-Past than many-Gen books-Acc read-Past
'John read more books than Mary did.' (*ibid.*)

Note that the clausal heads in (16-19) are not nominal, being incompatible with the demonstrative *sono* 'that' as in (23).

(23) *sono made/ni/kiri/niturete/tomoni/to/yori

Hiraiwa argues that these examples above show that it is not D but C that licenses Genitive subjects.

Hiraiwa further shows that inside clauses which allow Genitive subjects, predicates always occur in their attributive form (*rentai-kei*). Notice the morphological difference between the underlined predicates in the relative clause in (24) and the matrix clause in (25).

(24) John-ga/no suki-na ongaku-wa bluesda.
John-Nom/Gen like-Pres music-Top bluesbe-Pres
'The music that John likes is the Blues.'
(Hiraiwa 2001: 83 with slight modification)

(25) John-wa blues-ga suki-da.
John-Top blues-Nom like-Pres
'John likes the Blues.'

Based on this fact, Hiraiwa argues that the Genitive Case assignment is related to a special type of C, C_{affix}, which makes an attributive form of a predicate, and proposed the structure in (26).

(26) $[_{DP}\ [_{NP}\ [_{CP}\ [_{TP}$ John-no sukina] $C_{affix}]$ ongaku]]
↑ └──────┘
Case assignment

Hiraiwa accounts for the scopal fact illustrated in (14), proposing that the genitive subject can

be base-generated in Spec, DP, just like in the possessive configuration in (27).

(27) a. John-no hon
John-Gen book
'John's book'
b. [$_{DP}$ John-no [$_{NP}$ hon] D]

When the subject is marked for Nominative, it is licensed inside the sentential modifier; hence, only the narrow scope reading of the subject is possible.

(28) [$_{DP}$ [$_{NP}$ [$_{CP}$ [$_{TP}$[ruby or pearl]-Nom predicate] C] probability] D]

On the other hand, when the subject is marked for Genitive, there are two possible structures, as illustrated in (29). The narrow scope reading of the subject arises when the subject is generated inside the sentential modifier as in (29a), and the wide scope reading arises when the subject is base-generated in Spec, DP as in (29b).

(29) a. [$_{DP}$ [$_{NP}$ [$_{CP}$[$_{TP}$ [ruby or perl]-Gen predicate] C] probability] D]
b. [$_{DP}$[ruby or perl]-Gen$_i$ [$_{NP}$ [$_{CP}$[$_{TP}$ *pro*$_i$ predicate] C] probability] D]

2.1.3. The Anti-licensing Approach

Kobayashi (2013a, 2013b), argues against the C-licensing approach, showing the following example (30). In (30), although the predicate *tukamaru* 'be captured' does not occur in its attributive form, the subject can be marked for Genitive.

(30) Hannin-ga/no tukamari-sidai, renraku-o kure.
criminal-Nom/Gen be.captured-as.soon.as call-Acc give.Imp
'Give me a call, as soon as the criminal is captured.' (Kobayashi (2013b: 48))

Then, she provides a new descriptive generalization of NGC: NGC is allowed in selected tense clauses, as well as nominal complement clauses. A selected tense clause is a clause which does not show full Present/Past. For example, replacing the predicate *tukamari* in (30) with its past tense counterpart results in an ungrammatical sentence as in (31).

(31) *Hannin-ga/no tukamat-ta-sidai, renraku-o kure.
criminal-Nom/Gen be.captured-Past-as.soon.as call-Acc give.Imp

Exactly the same effect is observed in (16-19) in which Genitive subjects are allowed in clauses without a nominal head.[10]

(32) a. John-wa [ame-ga/no yam-u made] office-ni i-ta.
John-Top rain-Nom/Gen stop-Pres until office-at be-Past
'John was at his office until the rain stopped.' (=(16))

[10] (22) seems to be problematic to Kobayashi's generalization. The past-tense morpheme in (ia) can be replaced with the present-tense morpheme as in (ib).
(i) a. John-wa [Mary-ga/no yom-da yori] takusan-no
John-Top Mary-Non/Gen read-Past than many-Gen
hon-o yon-da.
books-Acc read-Past
'John read more books than Mary did.' (=(20))
b. John-wa [Mary-ga/no yom-u yori] takusan-no
John-Top Mary-Non/Gen read-Past than many-Gen
hon-o yom-u darou.
books-Acc read-Pres will
'John will read more books than Mary will.'

b. *John-wa [ame-ga/no yam-da made] office-ni i-ta.
John-Top rain-Nom/Gen stop-Past until office-at be-Past

(33) a. [Boku-ga/no omo-u ni] John-wa Mary-ga suki-ni-tigaina-i.
I-Nom/Gen think-Pres Dat John-Top Mary-Nom like-Dat-must-Pres
'I think that John likes Mary.' (=(17))
b. *[Boku-ga/no omo-u ni] John-wa Mary-ga suki-ni-tigaina-i.
I-Nom/Gen think-Past Dat John-Top Mary-Nom like-Dat-must-Pres

(34) a. [Sengetsu ikkai denwa-ga/no ar-ta kiri] John-kara nanimo renraku-ga
last.month once call-Nom/Gen be-Past since John-from any call-Nom
nai.
Neg
'There has been no call from John since he called me up once last month.'(=(18))
b. *[Sengetsu ikkai denwa-ga/no ar-u kiri] John-kara nanimo renraku-ga
last.month once call-Nom/Gne be-Pres since John-from any call-Nom
nai
Neg

(35) a. Kono atari-wa [hi-ga/no kure-ru nitsure(te)] hiekondeku-ru.
here around-Top sun-Nom/Gengo.down-Pres as get.colder-Pres
'It gets chillier as the sun goes down around here.' (=(19))
b. * Kono atari-wa [hi-ga/no kure-ta nitsure(te)] hiekondeku-ru.
here around-Top sun-Nom/Gengo.down-Past as get.colder-Pres

(36) a. John-wa [toki-ga/no tat-u to tomoni] Mary-no koto-o
John-Top time-Nom/Gen pass-Press with as Mary-Gen fn-Acc
wasurete-it-ta.
forget-go-Past
'Mary slipped out of John's memory as times went by.' (=(20))

b. *John-wa [toki-ga/no tat-ta to tomoni] Mary-no koto-o
John-Top time-Nom/Gen pass-Past with as Mary-gen FN-Acc
wasurete-it-ta.
forget-go-Past

(37) a. [John-ga/no ku-ru to ko-na-i to] dewa ootigai
John-Nom/Gen come-press and come-Neg-Pres and Top great.difference
da.
Cpl-Pres
'It makes a great difference whether John comes or not.' (=(21))

b. *[John-ga/no ki-ta to ko-nakat-ta to] dewa ootigai
John-Nom/Gen come-Past and come-Neg-Past and Top great.difference
da.
Cpl-Pres

To account for the above mentioned generalization, Kobayashi makes the following proposals.

(38) Anti-realization conditions on unmarked cases

a. An unvalued case feature on D cannot be realized as *–ga* in a [-Tense] domain.

b. An unvalued case feature on D cannot be realized as *–no* in a [+Tense] domain.

c. [-Tense] is carried by D, and [+Tense] is carried by T.

d. A complementizer which heads nominal complement TP and selected tense TP is a defective C.

e. The [+Tense] feature on C is copied onto T, whereas the [+Tense] feature on a defective C (defC) is inherited by T.

(i) $[_{CP}\ [_{TP}\ [_{vP}\ ]\ T_{[+Tense]}]\quad C_{[+Tense]}]$ (ii) $[_{CP}\ [_{TP}\ [_{vP}\ ]\ T_{[+Tense]}]\quad defC_{[+Tense]}]$

Copy Inherit

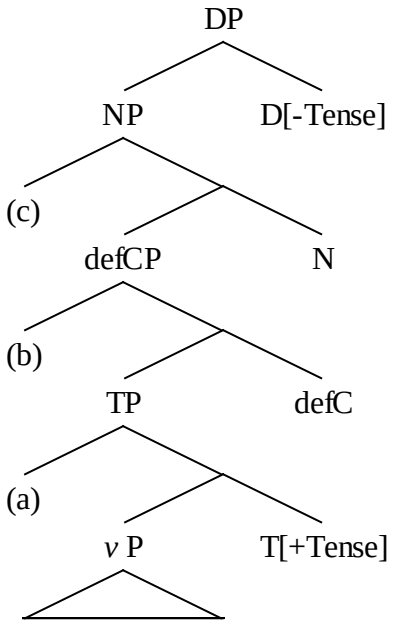
Now, consider the example (39), where the genitive subject occurs inside a nominal complement TP. (40) is its structure. (40a-c) are possible subject positions.

(39) [John-ga/no kat-ta] hon

John-Nom/Gen buy-Past book

'the book which John bought'

(40)



Provided that CP (def CP), *v*P and DP are phases, the subject occurring in (31a) is free from both conditions in (38a, b): at the def CP phase level, the subject is outside the domain of [+Tense] and [-Tense]. Therefore, the subject can either be marked Nominative or Genitive. On the other hand, when the subject is base-generated in (40b) or (40c), it cannot be marked for Nominative, since these positions are inside the domain of [-Tense] at the DP phase level.

The scope fact in (14) (repeated below as (41)) can be accounted for in the following way.

(41) a. [[[rubii-ka sinzy]-ga yasuku-naru] kanoosee]-ga 50% izyoo da.
ruby-or pearl-Nomcheap-become probability-Nom 50% over is
i. 'The probability that rubies or pearl become cheap is over 50%.'
ii.*'The probability that rubies become cheap or the probability that pearls become cheap is over 50%.'
probability>[ruby or pearl]; *[ruby or pearl]>probability

b. [[[rubii-ka sinzy]-no yasuku-naru] kanoosee]-ga 50% izyoo da.
ruby-or pearl-Gen cheap-become probability-Nom 50% over is
i. 'The probability that rubies or pearl become cheap is over 50%.'
ii. 'The probability that rubies become cheap or the probability that pearls become cheap is over 50%.'
probability>[ruby or pearl]; [ruby or pearl]>probability

The Nominative-marked subject in (41) has only the narrow scope reading with respect to the head noun *kanoosee* 'probability,' because (40a) is the only place available for Nominative Case. On the other hand, Genitive subject can freely occur in any place in (40a-c). If the subject occurs in (40a) or (40b), the narrow scope reading arises, and if the subject occurs in

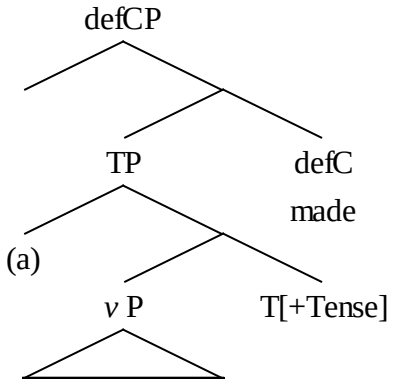
(40c), the wide scope reading arises.

NGC in selected tense clauses like (32) (repeated here as (42)) can be accounted for in the same way as NGC in nominal complement clauses.

(42) a. John-wa [ame-ga/no yam-u made] office-ni i-ta.
John-top rain-Nom/Gen stop-Pres until office-at be-Past
'John was at his office until the rain stopped.'

b. *John-wa [ame-ga/no yam-da made] office-ni i-ta.
John-Top rain-Nom/Gen stop-Past until office-at be-Past

(43)



Since the [+Tense] feature is inherited onto T, Spec, TP is outside the domain of [+Tense]. As a result, the subject in the selected tense clauses can be marked either for Nominative or for Genitive.

2.1.4. Some Problems

The D-licensing approach, the C-licensing approach and the anti-licensing approach however, cannot account for why the Genitive in (6) (repeated here as (44)) has the properties illustrated in (7) (repeated here as (45)).

(44) John-ga/?no kur-u hazu-ga na-i.
John-Nom/Gen come-Pres should-Nom Neg-Pres
'It cannot be the case that John will come.'

(45) The Genitive subjects of type (44) are licensed
a. in a negative polarity environment.
b. only with an unaccusative predicate.

2.1.5. The Dependent-T-licensing Approach

Miyagawa (2012a, 2013) argues that there exist a special type of Genitive which is licensed by a combination of Dependent-T and weak *v*, besides the one licensed by D. It has been observed by Fujii (1988) and Miyagawa (1989) among others that Genitive subjects are allowed in some temporal adjunct clauses. Furthermore, they show that Genitive subjects in temporal adjunct clauses are allowed only when the predicate is an intransitive verb or a passivized transitive verb as in (46); hence NGC in temporal adjunct clauses is induced in some different system than that induces NGC in nominal complement clauses.

(46) a. Subject of an unaccusative verb
[[John-ga/no ki-ta] toki], boku-wa tonari-no heya-ni i-ta.
John-Nom/Gen come-Past time I-Top next-Nom room-Dat be-Past
'I was in the next room when John came.

b. Subject of a passivized transitive verb

[[John-ga/no nagur-are-ta] toki], boku-wa tonari-no heya-ni i-ta.

John-Nom/Gen slap-Psv-Past time I-Top next-Nom room-Dat be-Past

'I was in the next room when John was slapped.'

c.. Subject of an unergative verb

[[John-ga/*no waraw-ta] toki], boku-wa tonari-no heya-ni i-ta.

John-Nom/Gen smile-Past time I-Top next-Nom room-Dat be-Past

'I was in the next room when John smiled.'

d. Subject of a transitive verb

[[John-ga/*no Bill-o nagur-ta] toki],boku-wa tonari-no heya-ni

John-Nom/Gen Bill-Acc slap-Past time I-Top next-Nom room-Dat

i-ta.

be-Past

'I was in the next room when John slapped Bill.'

Notice that Genitive subject is allowed irrespective of the type of a predicate when a temporal clause occurs as an argument.

(47) a. John-ha [[Bill-ga/no ki-ta] toki]-o sit-teiru.

John-Top Bill-Nom/Gen come-Past time-Acc know-Pres

'John knows the time when Bill came.'

b. John-ha [[Bill-ga/no waraw-ta] toki]-o sit-teiru.

John-Top Bill-Nom/Gen smile-Past time-Acc know-Pres

'John knows the time when Bill smiled.'

Miyagawa calls the genitive of type (46) Genitive of defective tense (GODT) and argues that the GODT is licensed by a combination of week *v* and dependent T.[11]

Recall the contrast illustrated in (10) (repeated here as (48)). The Genitive subject of type (6) is quite similar to GODT to the extent that they are licensed by intransitive verb.

(48) a. Subject of an unaccusative verb

John-ga/no ku-ru hazu-ga nai.

John-Nom/Gen come should-Nom Neg

'It cannot be the case that John will come.'

b. Subject of an unergative verb

John-ga/*no hasi-ru hazu-ga nai.

John-Nom/Gen run should-Nom Neg

'It cannot be the case that John will run.'

c. Subject of a transitive verb

John-ga/*no hon-o yom-uhazu-ga nai.

John-Non/Gen book-Acc read should-Nom Neg

'It cannot be the case that John will read the book.'

d. Object of a stative verb

John-ga eigo-ga/*no hanas-eru hazu-ga nai.

John-Nom English-Nom/Gen speak-can should-Nom Neg

'It cannot be the case that John can speak English.'

The Genitive of type (6), however, is different from GODT in that it is incompatible with a

[11] Miyagawa (2012a) argues, in accordance with Whitman (1992), that *toki* 'time' in temporal adjunct clause is C, rather than N.

passivized predicate or a predicate with a Nominative object as illustrated in (49). Recall that the subject of a passivized predicate can also be marked for Genitive as illustrated above in (46b).

(49) a John-ga/*no nagur-areru hazu -ga nai.
John-Nom/Gen slap-Psv should-Nom Neg.
‘(lit.) It cannot be the case that John is slapped.’

b. John-ga piano-ga/*no hik-eru hazu-ga nai.
John-Nom piano-Nom/Gen play-can should-Nom Neg
‘(lit.) It cannot be the case that John can play the piano.’

Further difference is observed with respect to the tense marker. GODT is allowed irrespective of the tense marker on the predicate.

(50) a. [[John-ga/no ki-**ta**] toki], boku-wa tonari-no heya-ni i-ta.
John-Nom/Gen come-Past time I-Top next-Nom room-Dat be-Past
‘I was in the next room when John came.’

b. [[John-ga/no ku-**ru**] toki], boku-wa tonari-no heya-ni i-ru.
John-Nom/Gen come-Press time I-Top next-Nom room-Dat be-Press
‘I will be in the next room when John comes.’

On the other hand, Genitive subject of type (6) is not allowed when the predicate has a past tense.

(51) a. John-ga/no ku-ru hazu-ga nai.
John-Nom/Gen come should-Nom Neg
'It cannot be the case that John will come.'

b. John-ga/*no ki-ta hazu-ga nai.
John-Nom/Gen come-Past should-Nom Neg
'It cannot be the case that John came.'

Therefore, I consider that GODT and Genitive case in the *hazu-ga-nai*-construction are licensed in different ways.

2.2. Previous Analyses of the *hazu-ga-nai* construction

2.2.1. The Restructuring Analysis

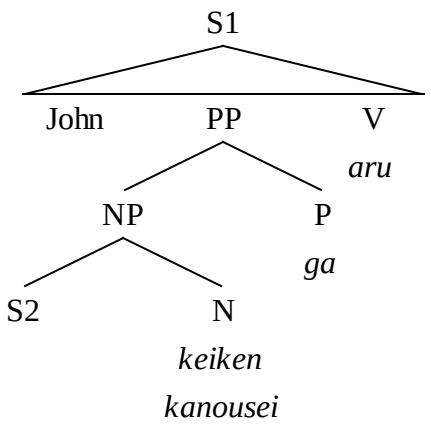
Muraki (1978) and Kishimoto (1996) point out that there are some combinations of NP-P-V which undergo restructuring as illustrated in (52).

(52) a. *Keiken-ga-aru*
John-wa eigo-o osie-ta keiken-ga aru.
John-Top English-Acc teach-Past experience-Nom have
'John has the experience of teaching English.'

b. *Kanousei-ga-aru*
John-ga Tokyo-ni iku kanousei-ga aru.
John-Nom Tokyo-Dat go possibility-Nomhave
'It is possible for John to go to Tokyo.'

It seems that (52) has a bi-clausal structure like (53).

(53)



Examples in (52), however, have the mono-clausal nature as is seen in the following example (54). The negative polarity item NP-*sika* 'NP-only' in the embedded clause can be licensed by the matrix negation marker.

(54) a. *Keiken-ga-aru*

John-wa eigo-sika osie-ta keiken-ga nai.

John-Top English-only teach-Past experience-Nom Neg

'John has the experience of teaching only English.'

b. *Kanousei-ga-aru*

John-ga Tokyo-ni-sika iku kanousei-ga nai.

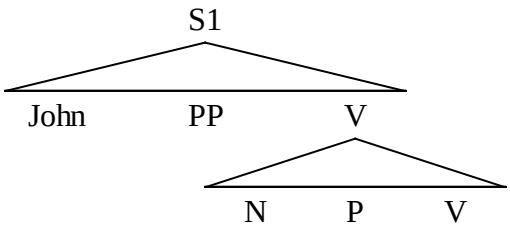
John-Nom Tokyo-Dat-only go possibility-NomNeg

'It is possible for John to go only to Tokyo.'

In order to account for this fact, Muraki (1978) and Kishimoto (1996) argue that there is an restructuring operation which yields (55) form the structure (52).[12]

[12] Kishimoto's (1996) analysis is slightly different from Muraki's (1978) analysis in that he argues that the restructuring operation takes place in LF.

(55)



Now, the *hazu-ga-nai* construction seems to involve a restructuring operation. Note that the *hazu-ga-nai* construction has the mono-clausal nature as in (56).

(56) John-wa ringo-sika taberu-hazu-ga nai.
John-Top apple-only eat-hazu-Nom Neg
'It should be the case that John will eat only apples.'

This structure seems to be able to capture the mono-clausal nature of (56). However, a question remains as to why Genitive in the *hazu-ga-nai* construction is allowed only with unaccusative predicates.

2.2.2. The Modal Analysis

It has been pointed out that *hazu* has at least two usages. This is based on the following fact that the sentence with *hazu* in (57) can be paraphrased in two ways.

(57) John-wa gakkoo-ni iku hazu da.
John-Top school-Dat go hazu Cop
a. 'I am certain that John will go to school.'
b. 'John is supposed to go to school.'

Based on Barbiers' (2006) definition of root modals and epistemic modals that "[r]oughly, epistemic interpretations are a class of interpretations involving a speaker-oriented or, in the case of embedded clauses, matrix-subject oriented qualification or modification of the truth of a proposition, while root interpretations involve the will, ability, permission, or obligation to perform some action or bring about some state of affairs" (Barbiers (2006: 1-2)), Akiba (2006) argues that (57a) is the epistemic interpretation of *hazu* and (57b) is the root interpretation of *hazu*.

Akiba shows that when the whole sentence has a past tense as in (58), it only has the root interpretation.

(58) Taro-wa gakkoo-ni iku hazu dat-ta.

a. *I was certain that Taro went to school.

b. Taro was supposed to go to schoo.

On the other hand, we get only the epistemic reading when the predicate in the complement of *hazu* has a past tense as in (59).

(59) Taro-wa gakko-ni it-ta hazu-da.

a. I am certain that Taro went to school.

b. *Taro is supposed to go to school.

Although he does not clearly show exactly in which category the two types of *hazu* occur, he shows that there is the following hierarchical order as in (60).

(60) CP > *hazu* (epistemic) > T > *hazu* (root)

This analysis seems plausible in that it can capture the contemporary variation of *hazu*. However, again, it is not clear why Genitive in the *hazu-ga-nai* construction is allowed only with unaccusative predicates. It seems that we need more articulated structure for the *hazu-ga-nai* construction.

3. *Hazu* in Contemporary Japanese

This section makes a closer look at the *hazu-ga-nai* construction and provides a descriptive generalization. It will be shown that the complement of *hazu* in the *hazu-ga-nai* construction must be a minimal verb phrase, namely VP, rather than *v*P, VoiceP, NegP or TP, and that Genitive Subjects are licensed inside the complement of *hazu*.

3.1. The Size of the Complement of *Hazu*

This section deals with the syntactic category of the complement of *hazu* in the *hazu-ga-nai* construction. It will be shown that the Genitive subject of type (6) is possible only if the complement of *hazu* is VP.

Different sizes illustrated in (61) can be considered as the complement of *hazu*. Only (61a), the one with VP, however, is grammatical when the subject is marked Genitive. This fact shows that the licensing of Genitive in the *hazu-ga-nai* construction is possible only if the complement of *hazu* is the minimum verb phrase, namely, VP.

(61) a. John-ga/no kuru hazu-ga nai. (VP)
John-Nom/Gen come should-Nom Neg
'It should not be the case that John comes.'

b. John-ga/*no hasiru hazu-ga nai. (*v*P)
John-Nom/Gen run should-Nom Neg
'It should not be the case that John runs.'

c. John-ga/*no ko-nai hazu-ga nai. (NegP)
John-Nom/Gen come-Neg should-Nom Neg
'It should not be the case that John does not come.'

d. John-ga/no (*kyo) kuru hazu-ga nai. (TP)
John-Nom/Gen today come should-Nom Neg
'It should not be the case that John came.'

It seems that the Genitive subject in the *hazu-ga-nai* construction is licensed by weak *v* just like GODT. The *hazu-ga-nai* construction, however, does not allow the Genitive subject with other types of weak *v* such as a passive morpheme *(r)are*.

(62)*John-ga/*no nagur-areru hazu-ga nai.
John-Nom/Gen slap-Psv should-Nom Neg
'It should not be the case that John is slapped.'

This fact shows that the Genitive in the *hazu-ga-nai* construction is related to the smallest VP, rather than weak *v*.

Given that the complement of *hazu* is VP, it follows that the morpheme *-u* on the predicate does not function as a tense marker. Then, it is expected that the morpheme *-u* cannot alternate with a past marker *-ta*. As expected, the following example, where the predicate occurs in its past form, is ungrammatical when the subject is marked Genitive.

(63) a. John-ga kur-u/ki-ta hazu-ga nai.
John-Nom come-Pres/come-Past should-Nom Neg

b. John-no ?kur-u/*ki-ta hazu-ga nai.
John-Gen come-Pres/come-Past should-Nom Neg
'It should not be the case that John comes/came.'

To sum up, this section has shown that in the *hazu-ga-nai* construction, the complement of *hazu* must be the smallest verb phrase, namely VP, when the subject is marked Genitive.

3.2. The Position of the Genitive Subject

This section is concerned with the syntactic position of the Genitive subject in the *hazu-ga-nai* construction. It will be shown that the Genitive subject is licensed inside the complement of *hazu*.

According to Kishimoto (2001), Japanese negative polarity item *dare* 'anyone' must be licensed inside the domain of *mo* which is c-commanded by Neg. (64a), where *dare* and Neg occur in the same clause is fully grammatical. On the other hand, in the ungrammatical example (64b), *dare* occurs in the embedded clause whereas Neg occurs in the matrix clause.

(64) a. John-wa [Bill-ga dare-o yobi-mo si-nakat-ta to] it-ta
John-Top Bill-Nom anyone-Acc call-Q do-Neg-Past Comp say-Past
'John said that Bill did not call anyone.'

b. *John-wa [Bill-ga dare-o yobi-mo si-ta to] iwa-nakat-ta.
John-Top Bill-Nom anyone-Acc call-Q do-PastComp say-Neg-Past

Now, consider the example (65), where NPI occurs in the *hazu-ga-nai* construction. NPI occurs as the Nominative subject of a transitive predicate in (65a), the Nominative object of a stative predicate in (65b), the subject of a passivized transitive predicate in (65c), the Nominative subject of an unergative predicate in (65d) and the Nominative subject of an intransitive predicate in (65e). Among them, only (65c) is grammatical. The ungrammaticality of (65a-d) can be straight forwardly accounted for given Kishimoto's (2001) assumption that Nominative case must be licensed in Spec, TP. Therefore, (65a, c, d) is excluded because the Nominative-marked subject occurs in Spec, TP in overt syntax, which is outside of the domain of Neg. (65b) is also ungrammatical although NPI in (65a) seems to be inside the domain of Neg. Kishimoto argues, however, that even though a Nominative-marked element occurs in a lower position than TP in overt syntax, it must move to Spec, TP at LF. Now, let us move onto the grammatical (65e). The grammaticality of (65e) shows that the Nominative-marked subject of an intransitive predicate is somehow licensed in its base position.

(65) a. *Dare-ga kono hon-o yomu hazu-mo nakat-ta.
anyone-Nom this book-Acc read should-Q Neg-Past
'(lit.) It should not be the case that anyone read this book.'

b. *John-ni dono gakki-ga hik-eru hazu-mo nakat-ta.
John-Dat any instrument-Nom play-can should-Q Neg-Past
'(lit.) It should not be the case that John could play a musical instrument.'

c. *Dare-ga John-ni nagur-areru hazu-mo nakat-ta.
anyone-Nom John-Dat hit-Psv should-Q Neg-Past
'(lit.) It should not be the case that anyone is hit by John.'

d. *Dare-ga hasiru hazu -mo nakat-ta.

anyone-Nom run should-Q Neg-Past

‘(lit.) It should not be the case that someone runs.’

e. Dare-ga kuru hazu -mo nakat-ta.

anyone-Nom comeshould-Q Neg-Past

‘It should not be the case that someone comes.’

Exactly the same effect can be observed in (66), the Genitive counterpart of (65).

(66) a. *Dare-no kono hon-o yomu hazu-mo nakat-ta.

anyone-Gen this book-Acc read should-Q Neg-Past

‘(lit.) It should not be the case that anyone read this book.’

b. *John-ni dono gakki-no hik-eru hazu-mo nakat-ta.

John-Dat any instrument-Gen play-can should-Q Neg-Past

‘(lit.) It should not be the case that John could play a musical instrument.’

c. *Dare-no John-ni nagur-areru hazu-mo nakat-ta.

anyone-Gen John-Dat hit-Psv should-Q Neg-Past

‘(lit.) It should not be the case that anyone is hit by John.’

d. *Dare-no hasiru hazu -mo nakat-ta.

anyone-Gen run should-Q Neg-Past

‘(lit.) It should not be the case that someone runs.’

d. Dare-no kuru hazu -mo nakat-ta.

anyone-Gen comeshould-Q Neg-Past

‘It should not be the case that someone comes.’

This fact shows that the Genitive subject in the *hazu-ga-nai* construction is licensed in its base position, namely, in VP.

To sum up, this section has shown (i) that the complement of *hazu* in the *hazu-ga-nai* construction is VP, and (ii) that the Genitive subject in this construction is licensed in its base position.

4. Analysis

Now we are ready to discuss the structure of the *hazu-ga-nai* construction. In contemporary Japanese, we have at least two types of *hazu*, the one as PPI and the one as NPI. *Hazu* as PPI is not compatible with Genitive case as illustrated in (67a), while *hazu* as NPI is compatible with Genitive case as in (67b).

(67) a. John-ga/*no kuru hazu da
John-Nom/Gen come hazu Cop
'It cannot be the case that John will come.'

b. John-ga/no kur hazu -ga na-i.
John-Nom/Gen come hazu -Nom Neg-Pres
'It cannot be the case that John will come.'

Furthermore, recall that the *hazu* as NPI is compatible with Genitive case only if the predicate is an unaccusative verb as illustrated in (68).

(68) John-ga/no hasiru hazu -ga na-i.

John-Nom/*Gen run hazu -Nom Neg-Pres

'It cannot be the case that John will run.'

In what follows, I will show that *hazu* in (67a), (67b) and (68) is Mod, *n* and N/Mod, respectively.

4.1. *Hazu* as NPI with Genitive Subjects

Let us first start with *hazu* as NPI, which is compatible with Genitive case. We have seen in section 2 (i) that the complement of *hazu* must be VP, and (ii) that the Genitive subject in the *hazu-ga-nai* construction t is licensed in VP.

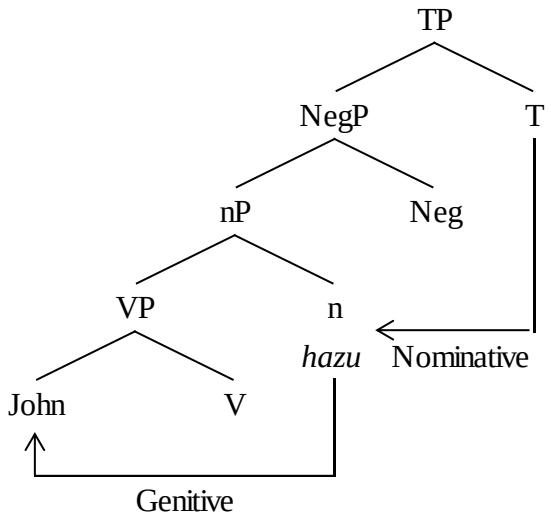
Now, I propose (70) as the syntactic structure of the *hazu-ga-nai* construction.

(69) John-no kuru hazu-ga nai.

John-Gen comeshould-Nom Neg

'It cannot be the case that John will come.

(70)



In (70) VP is selected by *n* rather than by *v*. *Hazu*, occurring as *n*, assigns Genitive case to the internal argument of the predicate in the same way that *v* assigns Accusative case. *Hazu* itself is assigned Nominative by T.

Now, we are ready to account for why (6) has the function illustrated in (7) (repeated here as (71))

(71) Genitive subjects of type (6) are licensed only when

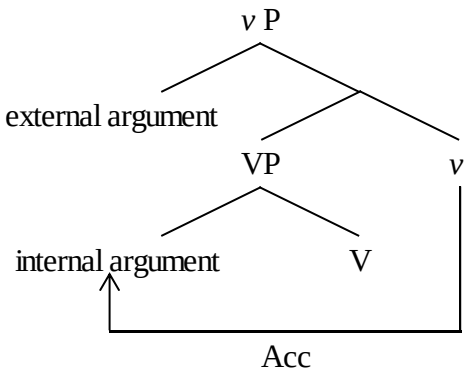
a. The predicate is an intransitive verb.

b. It occurs in a negative polarity sentence.

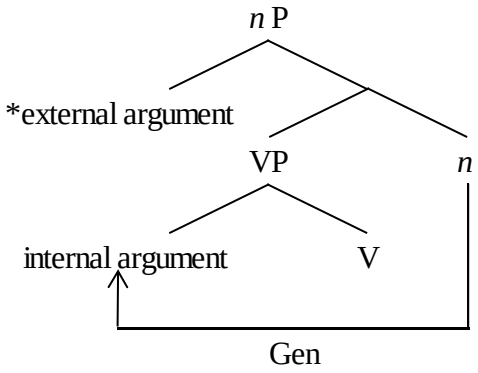
4.1.1. The Notion of *n*

The previous section introduced a new functional category *n* in (70). This section takes a closer look at the notion of *n*. It has been argued, since Chomsky (2001), that there are two types of *v*, transitive *v* (*v**), which is a strong phase (=(72)) and intransitive *v*, which is a weak phase. I suppose here that *n* is a weak phase and does not have external argument as in (72). In fact, Grimshaw (1990) argues that *the enemy* in the derived nominal *the enemy's destruction of the city* is an A-adjunct rather than an external argument.

(72)



(73)



Then, the property in (71a) is naturally accounted for. Recall that the complement of *hazu* must be an intransitive predicate as in (74).

(74) a. John-ga/?no kuru hazu-ga nai. (VP)
John-Nom/Gen come should-Nom Neg
'It should not be the case that John comes.'

b. John-ga/*no hasiru hazu-ga nai. (*v*P)
John-Nom/Gen run should-Nom Neg
'It should not be the case that John runs.'

c. John-ga/*no ko-nai hazu-ga nai. (NegP)
John-Nom/Gen come-Neg should-Nom Neg
'It should not be the case that John does not come.'

d. John-ga/*no ki-ta hazu-ga nai. (TP)
John-Nom/Gen come-Past should-Nom Neg
'It should not be the case that John came.'

n, just like *v*, must select VP; hence (74c, d), where NegP and TP are selected, are excluded. (74b), *hazu* selects a transitive predicate, is also unacceptable with a Genitive subject. This

is because *n* does not have the ability to license an external argument.

One might wonder why the subject in (74b) cannot be marked for Genitive in the same way that *the enemy* in *the enemy's destruction of the city* is marked for Genitive. I will come back to this problem in Section 4.2.

4.1.1. The Mono-clausal Nature of the Hazu-ga-nai Construction

The structure in (70) implies that a sentence with *hazu* has a mono-clausal structure. We can attest the mono-clausal nature by using NPI like *tittomo* 'at all'. Note that *tittomo* cannot be licensed by Neg across a clause boundary as in (75b).

(75) a. John-wa [Bill-ga tittomo warawa-nakat-ta to] it-ta.
John-Top Bill-Nom at.all laugh-Neg-Past Comp say-Past
'John said that Bill did not laugh at all.'

b. *John-wa [Bill-ga tittomo waraw-ta to] iwa-nakat-ta.
John-Top Bill-Nom at.all laugh-Past Comp say-Neg-Past
'(lit.) John did not say that Bill laughed at all.'

The acceptability of (76) shows that the *hazu-ga-nai* construction has a mono-clausal structure, and the structure proposed in (70) is consistent with this fact.

(76) John-wa tittomo warau hazu-ga nai.
John-Top at.all laugh should-Nom Neg
'John should not laugh at all.'

4.1.2. The NPI Nature of *Hazu*

Let's move onto the next property of the *hazu-ga-nai* construction (71b). I argue that the property (71b) holds because *hazu* in the *hazu-ga-nai* construction itself is a negative polarity item. *Nai* is a negative counterpart of an existential verb *aru* 'be' as illustrated in (77).

(77) a. Tukue-no ue-ni hon-ga ar-u.
desk-Gen top-Dat book-Nom be-Pres
'There is a book on the desk.'

b. Tukue-no ue-ni hon-ga na-i.
desk-Gen top-Dat book-Nom Neg-Pres
'There isn't a book on the desk.'

Hazu, however, cannot occur with the positive existential verb *aru*. Consider the following contrast in (78).

(78) a. *John-ga kuru hazu-ga ar-u.
John-Nom come should-Nom be-Pres
'(lit.) It should be the case that John will come.'

b. John-ga kuru hazu-ga nai.
John-Nom come should-Nom Neg
'It should not be the case that John will come.'

This fact shows that *hazu* in the *hazu-ga-nai* construction is indeed a negative property item.

4.2. *Hazu* as NPI without Genitive Subjects

We have discussed the structure of the *hazu-ga-nai* construction with a Genitive subject. *Hazu* as NIP, however, has some other variations as illustrated in (79).

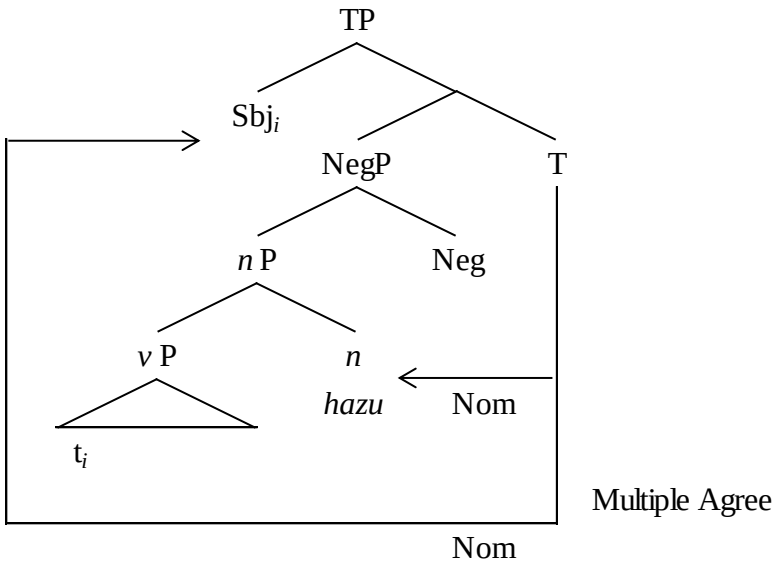
(79) a. John-ga/*no hasiru hazu -ga nai.
John-Nom/Gen run should-Nom Neg
'It should not be the case that John will run.'

b. John-ga/*no kita hazu-ga nai.
John-Nom/Gen come-Past should-Nom Neg
'It should not be the case that John came.'

(79a) is a variant of the *hazu-ga-nai* construction, in which a non-intransitive verb *hasiru* 'run' is used. (79b) is another variant of the *hazu-ga-nai* construction, in which a past-tensed verb occurs in the complement of *hazu*. In this section, I will consider the structure of these sentences.

Let us start with (79a), where a non-intransitive verb is selected. I propose that in (79a), *v*P, rather than VP, is selected as the complement of *n* as illustrated in (80).

(80)



In (80), the subject and *hazu* are assigned Nominative from T by Multiple Agree (cf. Hiraiwa (2001b)). One may wonder why the subject of (79a) cannot be assigned Genitive by *n* in its base position. The unacceptability of the Genitive counter part of (79a) can be accounted for given the subject in-situ generalization by Alexiadou and Anagnostopoulou (2001) in (81) and Bruzio's Generalization in (82).

(81) By Spell-Out VP can contain no more than one argument with an unchecked Case feature.[13] (Alexiadou and Anagnostopoulou (2001: 193))

(82) Bruzio's Generalization

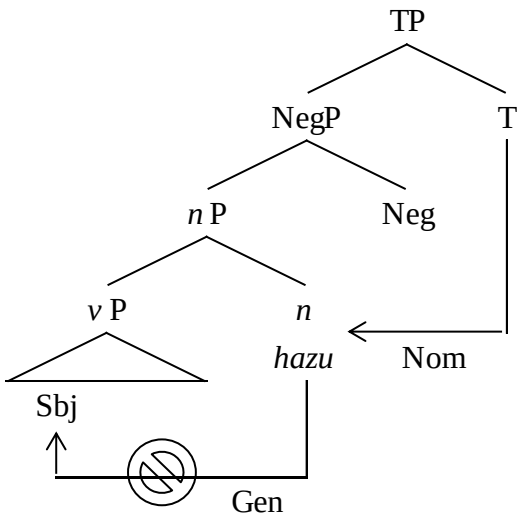
All and only the verbs that can assign θ-role to the subject[14] can assign (accusative) Case. (Burzio (1986: 178))

Now consider the structure (83), where the external argument stays its base position. I

[13] The term VP here does not mean the smallest size of a verb phrase. Rather, it indicates a larger syntactic unit including *v*P.
[14] The term *subject* here refers to an external argument.

suppose that the verb *haziru* 'run,' which assigns θ-role to its external argument, has an implicit Accusative-marked argument. If the subject stays inside *v*P and Case-checked by *n*, there are Case features in a verb phrase, violating the subject in-situ generalization.

(83)



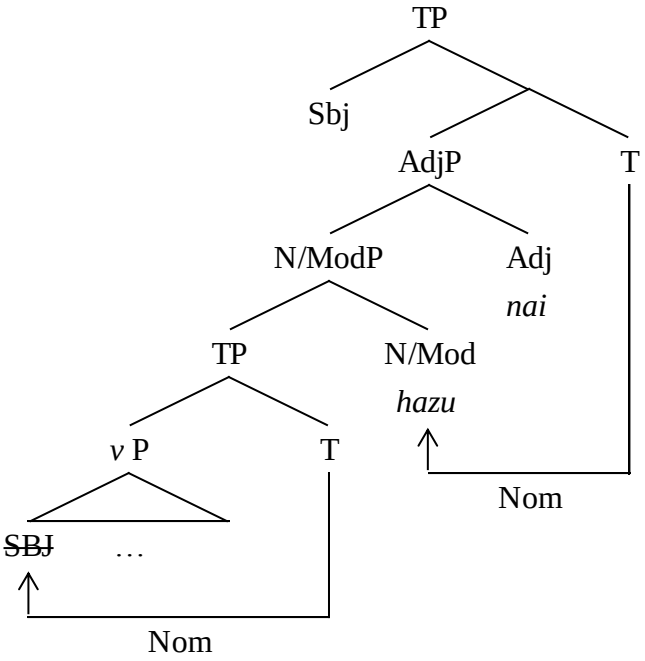
Let us move on to another variant of the *hazu-ga-nai* construction, where *hazu* selects TP as its complement as illustrated in (79b) (repeated here as (84)). Recall that the subject cannot be marked Genitive when the predicate is tensed.

(84) John-ga/*no hasit-ta hazu-ga nai.
John-Nom/Gen run-Past should-Nom Neg
'It should not be the case that John ren.'

I propose (85) as the structure of (84). In (85), *hazu* occurs as N/Mod and assigned Nominative by T in the matrix clause. The subject is assigned Nominative by T in the embedded clause. N/Mod is a mixed category of N and Mod. *Hazu* in (85) is nominal in the sense that it requires external case marker. On the other hand, *hazu* in (85) cannot assign

Genitive case to a nominal element in its domain.[15]

(85)



Notice that (85) is a bi-clausal structure unlike (70). Indeed, we can see slight difference with respect to the licensability of NPI. Recall that the *hazu-ga-nai*-construction can license NPI in the complement of *hazu* when the predicate is not past-tensed as illustrated in (76) (repeated here as (86a)). On the other hand, if the predicate is past-tensed, acceptability is degraded as illustrated in (86b). Given the different structures in (70) and (85), this different can be naturally accounted for.

(86) a. John-wa tittomo warau hazu-ga nai.
John-Top at.all laugh should-Nom Neg
'It cannot be the case that John will laugh.'

[15] One might wonder why the Genitive subject is allowed in (83), while it is not allowed in (86). I suppose here that N/Mod in (83) and (86) are in different stages of grammaticalization. *Hazu* in (86) is more grammaticalized and less nominal, and has lost its ability to assign Genitive Case.

b. *John-wa tittomo waraut-ta hazu-ga nai.
John-Top at.all laugh-Past should-Nom Neg
'It should not be the case that John laughed.'

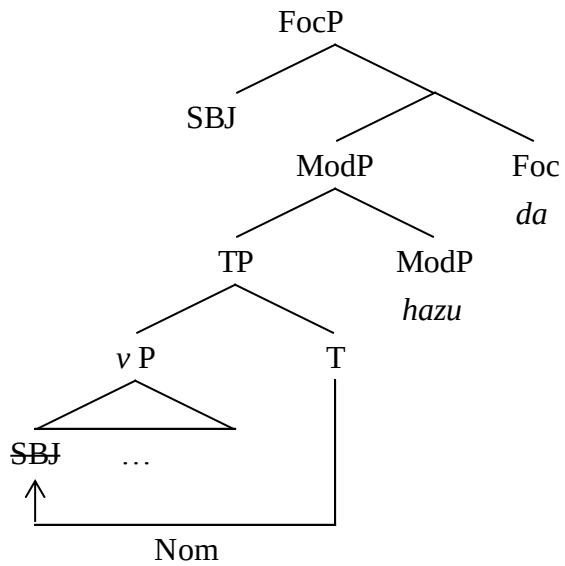
4.3. *Hazu* as PPI

Finally, Let us consider the structure of *hazu* occurring in a positive polarity sentence as illustrated in (87).

(87) John-ga/*no kuru hazu da.
John-Nom/Gen come should Cop
'It should be the case that John will come.'

I propose (88) as the structure of (87). In (88), *hazu* occurs as Mod, and is selected by the copula *da*. I argue that the *da* occurs as Focus head, following Hiraiwa and Ishihara (2001). *Hazu* as Mod does not bear the nominal nature; hence it cannot assign Genitive case to the subject.

(88)



The structure (88) can capture the fact that *hazu* in a positive polarity sentence can take a complement of any sizes. Consider the following example (89). *Hazu* can take either VP, *v*P, NegP or TP as its complement.

(89) a. John-ga/?no kuru hazu da. (VP)
John-Nom/Gen come should Cop
'It should be the case that John comes.'

b. John-ga/*no hasiru hazu da. (*v*P)
John-Nom/Gen run should Cop
'It should be the case that John runs.'

c. John-ga/*no ko-nai hazu da. (NegP)
John-Nom/Gen come-Neg should Cop
'It should be the case that John does not come.'

d. John-ga/*no ki-ta hazu da. (TP)
John-Nom/Gen come-Past should Cop
'It should be the case that John came.'

5. A Historical Perspective

5.1. The Data

This section shows the historical development of the usage of *hazu* by investigating Japanese historical corpora. I looked for the cases where *hazu* takes a clausal complement, using Japanese historical corpora listed below.

(90) a. *Chunagon* (900-1110, 1642)

https://chunagon.ninjal.ac.jp/chj/search

b. *Kosyokuitidaionna, Kosyokugoninonna* (1686)

c. *Sonezakisinju* (1703)

d. *Shinju Amano Tunasima* (1720)

e . *Fumikura* (1781-1884)

f. *Josei Zassi* (1895-1925)

g. *Taiyo* (1895-1925)

The first usage of *hazu* with a clausal complement occurred in 1642. We get four examples, but no subject is overtly expressed in these examples.

(91) Kokomoto-de ture-o matiawase-suru hazu zya hodo-ni, sonata-wa saki-e
here-at friend wait-do should Copbecause you-Top ahead
onobori-yare.
go.Imp
'Please go ahead, since I am supposed to wait my companion here.'

(1642: *Toraakira-bon*)

Then in 1686, the first usage of *hazu* with Genitive subject occurred in. Note that the Genitive subject in (92) is licensed in a positive polarity sentence, which is not allowed in contemporary Japanese as illustrated in (93).

(92) inakamono-no me-ni mo kore-wa gaten-no yuka-nu hazu nari.
countryman-Gen eye-Dat too this-Top understand-Gen can-Neg hazu Cop
'This cannot be understandable for countrymen, too.'
(1686: *Koshoku Ichidai Onnna*)

(93) *Kore-wa gaten-no yuka-nu hazu da.
This-Top understand-Gen can-Neg hazu Cop
'(lit.) This cannot be understandable.'

Then, after about 80 years from the first occurrence of *hazu* in a positive polarity sentence, the first usage of *hazu* in a negative polarity sentence occurred in 1720.

(94) So hiiki-seu hazu-ga nai.
that favor-do should-Nom Neg
'It cannot be the case that I will favor that.' (1720: *Shinju Amano Tunasima*)

Furthermore, among the data in the late 19th century, we can see some example where a modal *beki* 'should' occurs in the complement of *hazu*.

(95) izure suguri otori-no aru beki hazu naku
Any better worse-Gen be should hazu Neg
'There cannot be anything better or anything worse.' (1895: *Taiyo*)

(96) a. Oo sono hazu sono hazu.
Int that should that should
'It must be the case.' (1720: *Sonezaki Shinju*)

b. Iya sonna hazu-ha nai.
no that should-Top Neg
'No, It cannot be the case.' (1909: *Taiyo*)

Summing up the historical development of *hazu* with a clausal complement, we get Table 1. The shaded cells show that they are the first example of each usage.

Table 1: Historical Development of *Hazu*

Pos: Positive, Neg: Negative, Nom: Nominative Case, Gen: Genitive Case

Oth: Other Case markers or no Case markers

	1642			1686			1703			1720			1791			1875		
	Nom	Gen	Oth	Nom	Gen	Oth	Nom	Gen	Oth	Nom	Gen	Oth	Nom	Gen	Oth	Nom	Gen	Oth
Pos	0	0	4	0	1	6	1	0	2	0	1	2	0	0	1	0	0	0
Neg	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
	1895			1901			1909			1917			1925					
	Nom	Gen	Oth	Nom	Gen	Oth	Nom	Gen	Oth	Nom	Gen	Oth	Nom	Gen	Oth			
Pos	5	3	157	8	0	199	36	3	220	45	1	177	37	3	152			
Neg	6	8	16	2	5	10	12	29	54	15	16	36	25	16	55			

5.2. Analysis

This section shows how the structure of the *hazu-ga-nai* construction has changed through history. Given the upward reanalysis approach, I propose that the category of *hazu* has been reanalysed in the following way.

(97) a. [$_{N}$ *hazu*] ---> b. [$_{N/ModP}$ [$_{CP}$] [$_{N/Mod}$ *hazu*]] ---> c. [$_{nP}$ [$_{VP}$] [$_{n}$ *hazu*]]

|---> d. [$_{Mod}$ [$_{TP}$] [$_{Mod}$ *hazu*]

At the first time, *hazu* was used as N which referred to the notch of an arrow. Then it came to bear the nature as a modal as in (97b). Note that *hazu* in (97b) is a mixed category of N and Mod, which can be modified by CP. Now we have two different types of *hazu*, the one as *n* in (97c), which inherits the nominal nature of (97b) and the one as Mod in (97d), which inherits the modal nature of (97b).

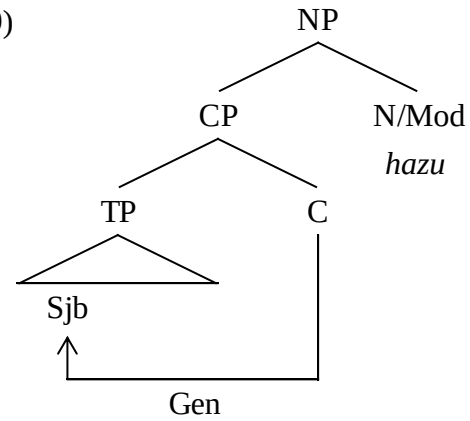
Now, recall that during 1686-1925, Genitive subjects are licensed in the complement of *hazu* irrespective of the polarity of a sentence. I propose that *hazu* in this period was a mixed category of N and Mod which can be modified by CP. I suppose here that the Genitive subject in (92) is licensed in the same way as in a nominal complement clause like (98).[16]

(98) John-ga/no waraw-ta riyuu

John-Nom/Gen smile-Past reason

'the reason that John smiled'

(99)



[16] See section 5.3 for the detailed discussion.

Recall that from around the late 19th century, there are some examples where a modal *beki* 'should ' occurs in the complement of *hazu* as in (95) (repeated here as (73)), which are not allowed in the contemporary Japanese.

(73) izure suguri otori-no aru beki hazu naku
Any better worse-Gen be should hazu Neg
'There cannot be anything better or anything worse.' (1895: *Taiyo*)

(72) *Suguri otori-ga aru beki hazu -ga nai.
better worse-Nom be should hazu-Nom Neg
'There cannot be anything better or anything worse.'

The examples like (73) are the instantiation which show that *hazu* used to take CP as its complement at least until 1925.

This section has shown how the structure of *hazu* with a clausal complement has changed diachronically. It has shown that *hazu* which used to be N has gradually lost its nature as a lexical category by virtue of upward reanalysis. As the result of the diachronic decategorization, possible domain for NGC is limited.

5.3. The C-licensing Approach of NGC

As is put forth in 5.2 I argue that Genitive subjects occurring in nominal complement clauses are licensed by C. This section argues for the C-licensing approach by comparing the distribution of NGC and another phenomenon which is said to be induced by C. More precisely, it is shown that Genitive subjects and politeness markers occur in complementary

distribution, and it is argued that the complementarity holds because two different types of C, C_{affix} and $C_{allocutive\ probe}$, occur complementarily in the same syntactic position.

5.3.1. The Distribution of Genitive Subjects and Politeness Markers

This section provides a new descriptive generalization regarding Genitive subjects in Japanese. More specifically, this section illustrates environments possible for Genitive subjects and politeness markers *desu*/*masu* in Japanese, and shows that they are in complementary distribution.[17] In (100-110), the (a) examples show whether or not a Genitive

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[17] Here, we basically treat only one type of politeness mariker, namely, *masu*. There is, however, another type of politeness marker *desu*. *Masu* attaches to verbal predicates as in (ia), and *desu* attaches to nominal predicates as in (ib).

(i) a. John-ga ki-masu.
John-NOM come-POL
'John will come.'

b. Kono hon-wa takai-desu
this book-TOP expensive-POL
'This book is expensive.'

An anonymous reviewer asks whether or not we can treat the two politeness markers in the same way. Although they show a slight difference regarding the word order with respect to negation as illustrated in (ii), they occur in the same environments: *desu* is allowed in clauses of type (103-106), and is not allowed in (107-110), just as *masu*.

(ii) a. John-wa ki-mas-en

subject is allowed in each clause, and the (b) examples show whether or not a politeness marker is allowed. First, consider (100-106) in which politeness markers are allowed.

(100) Main clause

a. John-ga/*no ki-ta.
   John-Nom/Gen come-Past

b. John-ga ki-masi-ta.
   John-Nom come-politeness.marker (Pol)-Past
   'John came'

(101) *Node* clause

a. Bill-wa [John-ga/*no ki-ta node] kaeri-masi-ta.
   Bill-Top John-Nom/Gen come-Past because go.home-Pol-Past

b. Bill-wa [John-ga ki-masi-ta node]
   Bill-Top John -Nom come-Pol-Past because
   kaeri-masi-ta.
   go.home-Pol-Past

   John-Top come-Pol-Neg
   'John won't come.'

b. Kono hon-wa takaku-nai-desu
   this book-Top expensive-Neg-Pol
   'This book is not expensive'

Therefore, it seems safe to treat the two politeness markers in the same way in the current discussion.

'Bill went home because John came.'

(102) *Kara* clause

a. Bill-wa [John-ga/*no ki-ta kara] kaeri-masi-ta.
   Bill-Top John-Nom/Gen come-Past because go.home-Pol-Past

b. Bill-wa [John-ga ki-masi-ta kara] kaeri-masi-ta.
   Bill-Top John -Nom come-Pol-Past because go.home-Pol-Past
   'Bill went home because John came.'

(103) *Ra* clause

a. [John-ga/*no ki-ta-ra] kaeri-mas-u.
   John-Nom/Gen come-Past-if go.home-Pol-Pres

b. [John-ga ki-masi-ta-ra] kaeri-mas-u
   John-Nom come-Pol-Past-if go.home-Pol-Pres
   'I will go home if John comes.'

Main clauses, *node* clauses, *kara* clauses and *ra* clauses allow politeness markers. Notice, however, that all types of clauses in (100-106) do not allow Genitive subjects, irrespective of whether the clauses are embedded or not.

Next, consider (104-110), in which Genitive subjects are allowed.

(104) Relative clause

a. [John-ga/no kat-ta] hon
   John-Nom/Gen buy-Past book

b. *[John-ga kai-masi-ta] hon

John-Nom buy-Pol-Past book

'the book which John bought'

(105) *Koto* clause

a. John-wa [Bill-ga/no ki-ta koto]-o sit-teiru.

John-Top Bill-Nom/Gen come-Past that -Acc know-Pres

b. *John-wa [Bill-ga ki-masi-ta koto]-o sit-teiru.

John-Top Bill-Nom/Gen come-Past that -Acc know-Pres

'John knows that Bill came.'

(106) *Niturete* clause

a. [Hi-ga/no kure-ru niturete] samuku natteki-ta.

sun-Nom/Gengo.down-Pres as chilly become-Past

b. *[Hi-ga kure-mas-u niturete] samuku natteki-ta.

sun-Nom go.down-Pol-Pres as chilly become-Past

'It gets chillier as the sun goes down.'

(107)*Made* clause

a. John-wa [Bill-ga/no kur-u made] ie-ni i-ta

John-Top Bill-Nom/gen come-Pres until home-Dat stay-Past

b. *John-wa [Bill-ga ki-mas-u made] ie-ni i-ta.

John-Top Bill-Nom come-Pol-Pres until home-Dat stay-Past

'John stayed his home until Bill came.'

Relative clauses, *koto* clauses, *niturete* clauses and *made* clauses allow Genitive subjects. Notice that politeness markers are not possible in these clauses.

The examples in (100-110) are summarized in table 2, showing that Genitive subjects and politeness markers occur in complementary distribution.

Table 2: the distribution of Genitive subjects and politeness markers

	Main clause	*Node* clause	*Kara* clause	*Ra* Clause	Relative clause	*Koto* Clause	*Niturete* clause	*Made* clause
NGC	*	*	*	*	√	√	√	√
POL	√	√	√	√	*	*	*	*

5.3.2. A Proposal

In this section, I explain why the complementarity in table 1 holds between Genitive subjects and politeness markers. In order to do so, I adopt two assumptions in (108) from previous studies, and propose (109).

(108)a. Genitive subjects are licensed by C_{affix} (Hiraiwa 2001).

b. Politeness expressions are triggered by $C_{allocutive\ probe}$ (Miyagawa 2012).

(109)C_{affix} and $C_{allocutive\ probe}$ occur complementarily in the same position.

We have already reviewed, in Section 3, Hiraiwa (2001), who argues that Genitive subjects in

Japanese are licensed by C. If polite expressions in Japanese are also induced by C, it naturally follows that the complementarity holds because the two different kinds of C compete in the same syntactic position. In fact, Miyagawa (2012b) argues that C is relevant to politeness expressions.

In what follows, I summarize Miyagawa's (2012) analysis of Japanese politeness markers, and then give an account of the complementarity in Table 2.

5.3.2.1. Japanese Politeness Markers as Allocutive Agreement

This section briefly summarizes Miyagawa's (2012) analysis of Japanese politeness markers *desu/masu*. His analysis is based on Oyharçabal's (1993) work on the so-called allocutive agreement in Souletin, an eastern dialect of Basque. In Souletin, different verbal forms are used depending on whom a speaker is talking to. For example, all sentences in (110) mean that Peter worked, but the predicates occur in different forms depending on addressees.

(110) a. To a male friend

Pettek lan egin dik

Peter.Erg work.Abs do.Prf Aux.3.S.Abs-2.S.C.Msc.Alloc-3.S.Erg

b. To a female friend

Pettek lan egin din.

Peter work.abs do.prf aux.-3.s.abs.2.s.c.fm.alloc-3.s.erg

c. To someone higher in status (formal)

Pettek lan egin dizü.

Peter work.abs do.prf aux.-3.s.abs.2.s.f.alloc-3.s.erg

d. Plural addressee

Pettek lan egin du.

Peret.erg work.abs do.prf aux-3.s.erg

(Miyagawa 2012: 82)

Furthermore, the allocutive agreement does not occur in certain embedded contexts such as relative clauses and complements as illustrated in (111, 128).

(111) a. [Lo egiten duen] gizona Manex dun

sleeping aux.3e.comp man.the John cop.3a.allo.fem

'The man [who is sleeping] is John.'

b. *[Lo egiten dinan] gizona Manex dun

sleeping aux.3e.allofem.comp man.the John cop.3a.allo.fem

(*ibid.*: 82-83)

(112) a. Ez dinat nahi [gerta dakion]

neg aux.1e.allofem want happen 3a.aux.3d.comp

'I don't want it to happen to him.'

b. * Ez dinat nahi[gerta dakionan]

neg aux.1e.allofem want happen 3a.aux.3d.allofem.comp (*ibid.*: 83)

The allocutive agreement is not allowed in interrogative sentences as illustrated in (113).

(113) a. Lan egiten duia hire lagunak?

work aux.3e.q your friend.erg

‘Does your friend work?’

b. *Lan egiten dina hire lagunak?

work aux.3e.allofem.q your friend.erg (*ibid.*)

The examples in (111-129) show that the allocutive agreement is prohibited in clauses with lexical complementizers. Based on this, Oyharçabal concludes that the allocutive agreement is borne by C.

Miyagawa (2012b) argues that allucative agreement in Souletin and politeness expressions in Japanese are essentially the same in that verbal inflection differs depending on whom a speaker is talking to. Japanese uses a politeness form of a predicate when a speaker is talking to an elderly or superior person as in (114a).

(114) a. To a superior person

Peter-wa hataraki-masi-ta.

Peter-top work-pol-past

b. To a friend

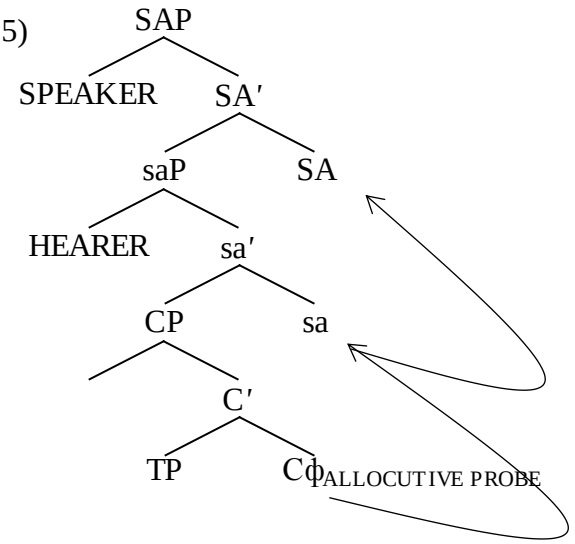
Peter-wa hatarai-ta.

Peter-top work-past

‘Peter worked.’ (Miyagawa 2012: 86)

Therefore, Miyagawa argues that Japanese politeness markers are also borne by C, adopting the structure in (115) from Haegeman and Hill (2011).

(115)



According to Speas and Tenny (2003) and Haegeman and Hill (2011), there is a superstructure, Speech Act phrase (SAP), above a CP, which encodes the relation between a speaker and a hearer. Note that there are two different projections for HEARER and SPEAKER respectively, namely, saP and SAP. The allocutive agreement is induced when $C_{\text{allocutive probe}}$ raises to Head, SAP, via head movement and properly c-commands its goal, HEARER.

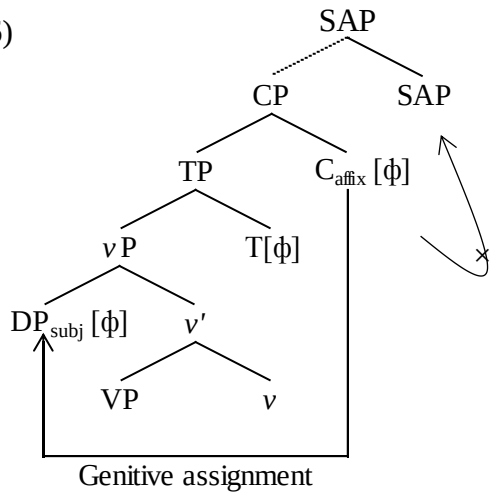
This section has summarized Miyagawa's (2012) work on Japanese politeness markers. It has been shown that Japanese politeness expression is a type of allocutive agreement and is related to a special type of C, $C_{\text{allocutive probe}}$.

5.3.2.2. The Complementarity of Genitive Subjects and Politeness Markers

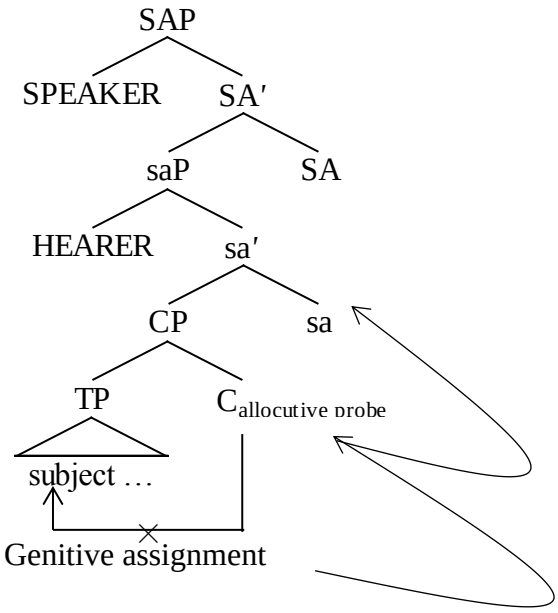
Now we are ready to discuss the complementarity of Genitive subjects and politeness markers in Japanese. Recall that Genitive subjects and politeness markers are borne by C. The complementarity can be straightforwardly accounted for, provided that the two phenomena discussed here are induced by two different types of C, C_{affix} and $C_{\text{allocutive probe}}$, and the two C heads occur complementarily in the same syntactic position. In environments possible for Genitive subjects, C_{affix} is always selected; hence politeness expressions are not allowed as in (116). On the other hand, in environments possible for politeness markers, $C_{\text{allocutive probe}}$ is

always selected; hence Genitive subjects are prohibited as in (117).[18]

(116)



(117)



To sum up, this section has provided an analysis of the complementarity between Genitive subjects and politeness markers observed in Section 3. This section has first introduced Miyagawa's (2012b) work which argues that Japanese polite expressions are induced by a special type of C, $C_{allocutive\ probe}$. Then, it has been argued that the complementarity can be straightforwardly explained given that Genitive Case assignment and

[18] We leave open the question as to whether C_{affix} projects to SAP or not.

polite expressions are related to different types of C which occur complementarily in the same syntactic positon.

6. Summary

This section has dealt with Nominative-Genitive alternation in Japanese. It has pointed out that the Genitive subject occurring in the complement of *hazu* behave differently from the one discussed in the literature. It has been shown that *hazu* in contemporary Japanese has at least three variants, *n*, Mod and N/Mod. It has been shown that NGC in the *hazu-ga-nai* construction in contemporary Japanese is invoked by *n*. I have also shown a historical fact that *hazu* was able to license Genitive subject even in positive polarity sentences around 1686-1925. I have shown that this fact can be naturally accounted for in terms of upward reanalysis of *hazu*. I have also dealt with Genitive subjects occurring in nominal complement cluases. Showing that Japanese politeness markers and Genitive subjects occur in complementarily, I argued for the C-lisencing approach of Genitive subjects.

Chapter 4. The *Aw*-construction

1. Introduction

This chapter concerns the binding nature of the Japanese reciprocal anaphor *otagai* 'each other.' In this chapter, I will show some peculiar facts regarding the binding nature of *otagai* and provide a new syntactic analysis of the so-called *aw*-construction.

English makes use of the reciprocal anaphor *each other* to indicate reciprocity between plural subjects as illustrated in (1a). *Each* can also occur in the position illustrated in (1b):

(1) a. John and Bill slapped each other.

b. John and Bill each slapped the other.

Note that there is a semantic difference between (1a) and (1b) in that in (1a) John's action and Bill's action have to occur at the same time while in (1b) they can occur at different times.

In contrast, Japanese has two expressions to indicate reciprocity between plural subjects. One makes use of a reciprocal anaphor *otagai* 'each other' as in (2) and the other makes use of a reciprocal V-V compound in which a verb *aw* 'meet' occurs as V2 as in (3) (hereafter the *aw*-construction). There is a difference between (2) and (3), the same one as observed with the English reciprocal expressions; namely, (2) can indicate that John's action and Bill's action can occur at different times and at different places, whereas (3) can only indicate that John's action and Bill's action occur at the same time and at the same place.

(2) John-to Bill-ga otagai-o nagut-ta.
John-and Bill-Nom each other (e.o.)-Acc hit-Past
'John and Bill hit each other.'

(3) John-to Bill-ga naguri-aw-ta.
John-and Bill-Nom hit-meet-Past
'John and Bill hit each other.'

Furthermore, *otagai* and *aw* can co-occur in a single sentence as illustrated in (4). Note that *otagai* in (4) can be marked either with Accusative case or Dative case.

(4) a. John-to Bill-ga otagai-o naguri-aw-ta.
John-and Bill-Nom e.o.-Acc hit-meet-Past
'John and Bill hit each other.'

b. John-to Bill-ga otagai-ni naguri-aw-ta.
John-and Bill-Nom e.o.-Dat hit-meet-Past
'John and Bill hit each other.'

However, some differences arise when the antecedents of *otagai* are split. *Otagai* basically does not allow split antecedents as illustrated in (5).

(5) * John-ga (kinoo) Bill-to otagai-o nagut-ta.
John-Nom yesterday Bill-with e.o.-Acc hit-Past
'John and Bill hit each other.'

However, we have a grammatical sentence when *otagai* occurs in the *aw*-construction. Note that only *otagai* with Accusative case is possible in this configuration and Dative case is not allowed.[19]

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[19] Some speakers do not see a serious difference between (6a) and (6b), but it seems that the contrast becomes sharper when we replace V1 with other verbs like *hihansuru* 'criticize' as illustrated in (i).

(i) a. John-ga Bill-to otagai-o hihansi-aw-ta.
John-Nom Bill-with e.o.-Acc criticize-meet-Past
'John and Bill criticized each other.'

b. ??John-ga Bill-to otagai-ni hihansi-aw-ta.
John-Nom Bill-with e.o.-Dat criticize-meet-Past
'(lit.) John and Bill criticized each other.'

We asked several informants regarding the acceptability of (6a, b) and (ia, b), and got the following result.

	Informant 1	Informant 2	Informant 3	Informant 4	Informant 5
(6a)	ok	ok	?*	?*	??
(6b)	?	?	?*	?	?
(ia)	ok	ok	ok	?	ok
(ib)	?	?	*	?	?

(6) a. John-ga Bill-to otagai-o naguri-aw-ta.
John-Nom Bill-with e.o.-Acc hit-meet-Past
'John and Bill hit each other.'

b. ? John-ga Bill-to otagai-ni naguri-aw-ta.
John-Nom Bill-with e.o.-Dat hit-meet-Past
'(lit.) John and Bill hit each other.'

In what follows, I propose a new analysis of the *aw*-construction where *aw* selects for VP or *v*P complement depending on whether its subjects are split or not, and *pro* resides in the subject position of V1 in the split antecedent configuration. I also claim that *aw* functions as what I call a coextensivizer, which unifies plural events into a single coextensive event.

Furthermore, I will survey Japanese historical corpora and show how the usage of the *aw*-construction has developed diachronically. It will be shown that the *aw*-construction had only the coextensive usage until 1642, and that *otagai* was able to be marked only with Dative Case until 1925. I will account for the fact that *otagai* with Dative Case occurred prior to the one with Accusative Case in the following way. *Otagai* was able to occur only in a syntactic configuration where a lexical V selects *otagai*. Lacking *v*P layer above VP, this configuration does not allow Accusative Case. Then the configuration became more complex by syntactic constructionizarion, projecting *v*P, and Accusative Case on *otagai* became available. Then it follows that among the two structures of the *aw*-construction, the one with VP complement occurred first, and the one with *v*P complement became possible by virtue of syntactic constructionalization.

This article proceeds in the following way: Section 2 reviews three analyses of the *aw*-construction by Ishii (1989), Nishigauchi (1992) and Yumoto (2005). I also point out some problems with their analyses in this section. Section 3 provides a new syntactic

analysis of the *aw*-construction. Section 4 discusses the semantics of the *aw*-construction. Then, section 5 surveys Japanese historical corpora and who how the usage of the *aw*-construction has developed diachronically. Finally, section 6 concludes the discussion.

2. Previous Studies on Reciprocal Expressions

This section reviews some previous analyses of English and Japanese reciprocal expressions. In 2.1 I will summarize Heim, Lasnik and May's (1991) analysis of English reciprocal expressions which is cited in many of the subsequent studies of Japanese reciprocal expressions cited here. In turn, I will summarize some previous studies of the *aw*-construction by Ishii (1989), Nishigauchi (1992) and Yumoto (2005) in 2.2, 2.3 and 2.4, respectively, and I will show that they have some empirical and theoretical problems.

2.1. Heim, Lasnik and May (1991)

Let me start with reviewing Heim, Lasnik and May's (1991) analysis of English reciprocal expressions, since their work is referred to by many analyses of Japanese reciprocal expressions cited below.

The most important part of their analysis is that they attribute different functions to *each* and *other*: *each* functions as a distributor and *other* functions as a reciprocator. Adopting this idea, the semantics of (7a) arises in the following way. In (7b), *each* moves out of its surface position to adjoin to its antecedents and then in (7c), *[e other]* adjoins to VP by QR and finally, the subject NP adjoins to TP by QR in (7d).

(7) a. John and Bill hit each other.

b. [[John and Mary]$_0$ each$_1$] like [e$_1$ other]

c. [[John and Mary]$_0$ each$_1$]$_1$ [e$_1$ other]$_2$ like e$_2$

d. [[John and Mary]$_0$ each$_1$]$_1$ [e$_1$ [[e$_1$ other]$_2$ like$_2$]]]

They propose this analysis to explain the following example. (8) can be construed in three ways as illustrated in (8a-c), namely, (8) is ambiguous with respect to the interpretation of *they*.

(8) John and Mary told each other that they should leave.

a. John told Mary that he should leave & Mary told John that she should leave.

b. John told Mary that she should leave & Mary told John that he should leave.

c. John told Mary, and Mary told John, "We should leave"

(Heim, Lasnik and May (1991: 64) with slight modification)

Given the derivation illustrated in (9), this ambiguity can be straightforwardly explained. (9a-c) correspond to the LF representation of (8a-c), respectively. The (a) reading of (8) arises when *they* is bound by the matrix subject which is distributed into individuals. (8b) arises when *they* is bound by [e_2 other] which gives rise to a reciprocal interpretation. (9c) arises when *they* is bound by the non-distributed matrix subject.

(9) a. [John and Mary$_1$ each$_2$] told [e_2 other]$_3$ that they$_2$ should leave

b. [John and Mary$_1$ each$_2$] told [e_2 other]$_3$ that they$_3$ should leave

c. [John and Mary$_1$ each$_2$] told [e_2 other]$_3$ that they$_1$ should leave (*ibid.:* 80)

2.2. Ishii (1989)

This section summarizes Ishii's (1989) analysis of the *aw*-construction. Pointing out some difference between the two reciprocal expressions in Japanese i.e. (2) and (3), he claims

that (i) *aw* has the syntactic role of absorbing an argument position of the verb to which it attaches and makes a symmetric predicate and (ii) if *otagai* occurs in the *aw*-construction, it loses its syntactic role as an anaphor. I will explain these points in 2.2.1 and 2.2.2 and then show some problems with his analysis in 2.2.3.

2.2.1. The Affixation of *Aw* to V1

The first difference pointed out by Ishii is illustrated in (10) and (11). On the one hand, when *otagai* occurs in the subject position of an embedded sentence as in (10a), it can be bound by the matrix subject *karera* 'they' while it cannot be bound by the matrix subject when it occurs in the object position of the embedded sentence.

(10) a. Karera-ga [otagai-ga Mary-o aisiteiru to] it-ta.
they-Nom e.o.-Nom Mary-Acc love Comp say-Past
'They said that each other loved Mary.'

b. * Karera-ga [Mary ga otagai-o aisiteiru to] it-ta.
they-Nom Mary-Nom e.o.-Acc love Comp say-Past
'(lit.) They said that Mary loved each other.' (Ishii (1989: 151))

On the other hand, as illustrated in (11), if a gap in the *aw*-construction occurs in an argument position of the embedded clause, whether it is the subject position or the object position, there arises an ungrammatical sentence.

(11) a. * Karera-ga [Mary-o aisiteiru to] sinzi-aw-ta.
they-Nom Mary-Acc love Comp believe-meet-Past
'(lit.) They believed that each other loved Mary.'

b. * Karera-ga [Mary ga aisiteiru to] sinzi-aw-ta.
they-Nom Mary-Nom love Comp believe-meet-Past
'(lit.) They believed that Mary loved each other.' (*ibid.*: 152)

This contrast shows that *aw* absorbs an argument position of the verb to which it attaches. Ishii further states that this affixation is a lexical operation rather than a syntactic one.

He also states that there is no empty category such as reciprocator in the gapped position of the *aw*-construction, showing the following contrast between (12) and (13). The (a) reading and the (b) reading differ with respect to the interpretation of *zibun* 'self'. (12) allows both the (a) and (b) readings whereas (13) only allows the (a) reading.

(12) John-to Mary-ga otagai-o zibun-no heya-de hatarak-ase-ta.
John-and Mary-Nom e.o.-Acc self-Gen room-in work-cause-Past
a. 'John caused Mary to work in John's room and Mary caused John to work in Mary's room.'
b. 'John caused Mary to work in Mary's room and Mary caused John to work in John's room.' (*ibid.*: 153)

(13) John-to Mary-ga zibun-no heya-de hatarak-ase-aw-ta.
John-and Mary-Nom self-Gen room-in work-cause-meet-Past
a. 'John caused Mary to work in John's room and Mary caused John to work in Mary's room.'
b. '*John caused Mary to work in Mary's room and Mary caused John to work in John's room.' (*ibid.*: 153)

He explains the ambiguity of (12) in the following way. (12a) arises when *zibun* is bound by the matrix subject and (12b) arises when *zibun* is bound by the reciprocator *otagai*. The fact that (13) does not have the (b) reading can be straightforwardly explained if I assume that there is no reciprocator in the *aw*-construction.

2.2.2. *Otagai* in the *Aw*-Construction

Ishii points out that there is another difference between the two reciprocal expressions. In general, *otagai* does not allow split antecedents as illustrated in (5) (repeated here as (14)). However, if *otagai* occurs in the *aw*-construction, then it allows split antecedents as illustrated in (6a) (repeated here as (15)).

(14) * John-ga (kinoo) Bill-to otagai-o nagut-ta.
John-Nom yesterday Bill-with e.o.-Acc hit-Past
'(lit.) John and Bill hit each other.'

(15) John-ga (kinoo) Bill-to otagai-o naguri-aw-ta.
John-Nom yesterday Bill-with e.o.-Acc hit-meet-Past
'John and Bill hit each other.'

Given that the object position of the verb *naguru* 'hit' is absorbed via the affixation of *aw*, *otagai* in (15) cannot occur in the object position of the V1. According to Ishii, *otagai* in (15) occurs in an adjunct position and loses its syntactic role as an anaphor; hence it allows split antecedents.

2.2.3. Some Problems

This section discusses some problems with Ishii's analysis. It will be pointed out that (i)

his analysis cannot explain the contrast in (6) and that the *aw*-construction should be regarded as a syntactic V-V compound.

The first problem with Ishii's analysis concerns the binding nature of *otagai*. Recall that *otagai* usually does not allow split antecedents as illustrated in (5), but exceptionally allows split antecedents when occurring in the *aw*-construction as illustrated in (6a) (repeated here as (16a)). According to Ishii, the affixation of *aw* to V1 is a lexical operation that absorbs an argument position of V1; hence, *otagai* occurs in a non-argument position when it occurs in the *aw*-construction. Since *otagai* occurs in a non-argument position, it loses its syntactic role as an anaphor and therefore allows split antecedents. However, this analysis predicts that (6b) (repeated here as (16b)) is also grammatical, contrary to the fact. He has to explain why it is that *otagai* allows split antecedents when it is marked with Accusative case whereas it does not when it is marked with Dative case.

(16) a. John-ga Bill-to otagai-o naguri-aw-ta.

b. ? John-ga Bill-to otagai-ni naguri-aw-ta.

The second problem concerns the classification of V-V compounds. Ishii states that the affixation of *aw* to V1 is a lexical operation. However, this view is incompatible with the classification of V-V compounds put forth by Kageyama (1993).[20] Kageyama proposes that V-V compounds can be distinguished between lexical V-V compounds and syntactic V-V compounds. The former belong to the lexicon and the latter belong to the syntax. He offers the following diagnostics (17a-d) to see whether a given V-V compound is lexical or syntactic. Since these are syntactic operations, they can be applied only to syntactic V-V compounds.

[20] Yumoto (2005) also argues that the *aw*-construction is formed by directly merging two verbal heads, V1 and *aw*. Note, however, that she claims that this is a syntactic operation, rather than a lexical operation. See 2.4 for details.

As for the *aw*-construction, I get the results of (18a-d).

(17) a. *Do so* replacement of V1

b. Subject honorification of V1

c. Passivization of V1

d. VN-*suru* construction as V1

(18) a. Otoko-tati-ga naguri-aw-teiru-no-o mite, onna-tati mo sou-si-aw-ta.
man-Pl-Nom hit-meet-ing-Gen-Acc see women-Pl too so-do-meet-Past
'Seeing boys hitting each other, girls did so, too.'

b. ?? Sensei-gata-ga onaguri-ninari-aw-ta.
teacher-Pl-Nom hit-honorificication-meet-Past
'(lit.) Teachers hit each other.'

c. ? Hutari-wa otagai-ga hihan-sare-aw-teiru to omot-ta.
two-Top e.o.-Nom criticize-passive-aw-ingComp think-Past
'The two thought that each other is being criticized.'

d. John-to Bill-ga otagai-o hihansi-aw-ta.
John-and Bill-Nom e.o.-Acc criticize-meet-Past
'John and Bill criticized each other.'

Although the subject honorification on V1 yields an odd sentence, the *aw*-construction passes the other diagnostics. Therefore, it seems safe to conclude that the *aw*-construction is a syntactic V-V compound rather than lexical V-V compound, contra Ishii's analysis.

Third, Ishii also claims that there is no reciprocator in the *aw*-construction showing the contrast between (12) and (13). However, if there is no reciprocator, it is not clear how a

mutual relation holds in (13). Ishii simply claims that a mutual relation arises because the affixation of *aw* makes V1 a symmetric predicate. However, there is good reason to believe that there is a null reciprocator in a sentence with a symmetric predicate, because we can sometimes see an overt reciprocator in some symmetric sentences. Japanese symmetric predicates take as their argumetns either a subject NP and a comitative phrase or just a plural subject as illustrated below.

(19) a. John-ga Mary-to kekkonsi-ta.
John-Nom Mary-with marry-Past
'John and Mary got married.'

b. John-to Mary-ga kekkonsi-ta.
John-and Mary-Nom marry-Past
'John and Mary got married.'

In (19a), the Comitative phrase *Mary-to* 'with Mary' occurs in an argument position of *kekkonsi* 'marry'. On the other hand, this position seems to be empty in (19b). However, I propose that this position is filled with a null reciprocator in (19b). As one piece of evidence for this proposal, symmetric predicates usually do not allow an overt reciprocator as illustrated in (20a), but an overt reciprocator is allowed when embedded as in (20b). Furthermore, English symmetric predicates allow an overt reciprocator even in a non-embedded configuration as in (21).

(20) a. * John-to Mary-ga otagai-to kekkonsi-ta.
John-and Mary-Nom e.o.-with marry-Past.
'(lit.) John and Mary married to each other.'

b. John-to Mary-ga otagai-to kekkonsi-tai to omot-teiru.
John-and Mary-Nom e.o.-with marry-want Comp think-Pres
'John and Mary want to marry to each other.'

(21) The hat and the coat match (each other).

(Ishii (1989: 155) with slight modification)

Although it is not clear why an overt reciprocator *otagai* 'each other' is allowed in (20a), but it seems to be safe to conclude that there is a phonetically null reciprocator in a sentence with a symmetric predicate.

2.3. Nishigauchi (1992)

This section summarizes Nishigauchi's (1992) analysis of the *aw*-construction. It will be shown that (i) V1+*aw* is a syntactic compound and (ii) the gap in the *aw*-construction is an empty reciprocator.

2.3.1. Basic Ideas

Nishigauchi states that the *aw*-construction has the following properties.

(22) a. Subject NP must be plural.
b. There must be a gap in an argument position of V1.
c. The antecedents of the gap must not be split.

I will have a quick review on these properties in this section. Let me start with (22a) which Nishigauchi calls *the plural requirement*. This restriction can be seen in the following

example.

(23) a. John-to Mary-ga naguri-aw-ta.
John-and Mary-Nom hit-meet-Past
'John and Mary hit each other.'
b. * John-ga naguri-aw-ta.
John-Nom hit-meet-Past
'(lit.) John hit each other.' (Nishigauchi (1992: 160) with slight modification)

(23a) has no problem since its subject is plural, whereas (23b) whose subject is singular is ungrammatical.

Let us move onto the second property of the *aw*-construction which Nichigauchi calls *the gap requirement*. Nishigauchi states that if a sentence of this type indicates reciprocity, there must be a gap in an argument position of V1. The following example shows this point.

(24) a. John-to Mary-ga [e] naguri-aw-ta.
John-and Mary-Nom hit-meet-Past
'John and Mary hit each other.'
b. * John-to Mary- ga Bill-o naguri-aw-ta.
John-and Mary-Nom Bill-Acchit-meet-Past
'John and Mary hit-aw Bill' (*ibid.*: 161)

In (24a), a reciprocal relation, namely a mutual hitting relation, holds between *John* and *Mary*. On the other hand, (24b) can indicate that *John and Mary hit Bill in an alternative order*, but no mutual relation holds between *John* and *Mary*.

A question arises as to under what condition the binding relation between the gap and its antecedent holds. I will see the nature of the gap in the next section.

Let us move onto the third property of the *aw*-construction, **Split Antecedents*. I have seen above that there must be a gap in an argument position of V1 in the *aw*-construction. Nishigauchi further states that the gap cannot be bound by split antecedents, showing example (25) where the gap cannot be bound by the split elements, namely *Bill* and *John*.

(25) * Bill-ga John-{o/ni} [e] syookaisi-aw-ta.
Bill-Nom John-Acc/Dat introduce-meet-Past
'(lit.) Bill introduced John to each other.' (*ibid.*: 162)

However, there are apparent counterexamples like (26), which is acceptable although the antecedents of the gap are split.

(26) John-ga (kinoo) Bill-to naguri-aw-ta.
John-Nom yesterday Bill-with hit-meet-Past
'John and Bill hit each other.' (*ibid.*)

Nishigauchi explains the acceptability of (26) by proposing the derivation illustrated in (27).

(27) [t_i John] ga kinoo [Bill to]$_i$ [e] naguri-aw-ta.

In (27), *John* and *Bill to* constitute a single NP *Bill to John* and the split antecedents arise as a result of extraposing the commutative phrase *Bill to*. (27) does not violate **Split Antecedent* because the gap is bound by the subject NP which contains the trace of *Bill to*, namely, *[t_i*

John].

2.3.1. The Nature of the Gap

I have seen that the *aw*-construction requires a gap in an argument position of V1 to indicate reciprocity. Nishigauchi claims that the gap cannot be an anaphor or a pronoun, showing the following examples.

(28) ? [John-to Mary]$_i$-ga [zibun-nosensei-tati$_j$-ga [e]$_{i/*j}$ home-ta to]
John-and Mary-Nom self-Gen teacher-Pl-Nom praise-Past Comp
zyasuisi-aw-ta.
suspect-meet-Past
'John and Mary each suspected that self's teachers praised the other.'
(Nishigauchi (1992: 165))

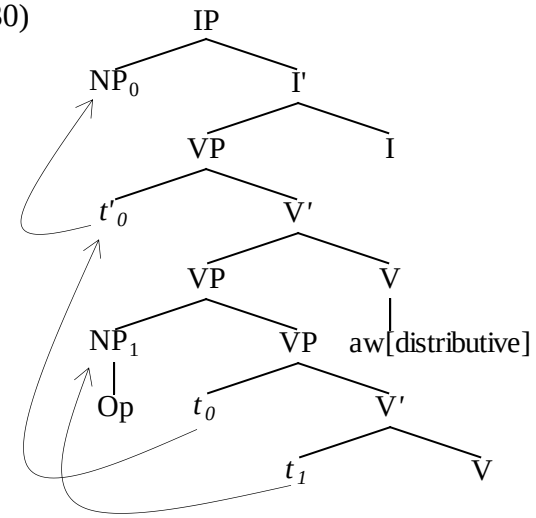
(29) [John-to Mary]$_i$-ga [sensei-tati$_j$-ga [e]$_{*i/j}$ home-aw-ta to] zyasuisi-ta.
John-and Mary-Nom teacher-Pl-Nom praise-meet-Past Comp suspect-Past
'John and Mary suspected that teachers praised each other.' (*ibid.*: 166)

In (28), *aw* attaches to the matrix predicate *zyasuisi* 'suspect' and the gap occurs in an argument position of the embedded verb *home* 'praise' and the gap is bound by the matrix subject *[John to Mary]* crossing a clause boundary. This is a clear violation of Condition (A) of the Binding Principle, so the gap in the *aw*-construction cannot be an anaphor. The gap cannot be a pronominal either since in (29) where *aw* and the gap occur in the embedded clause, the gap can be bound by the embedded subject *sensei-tati* 'teachers' violating Condition (B) of the Binding Principle. From these facts, he claims that the gap falls into a

Condition (C) realm. In other words, the gap should be a variable which is A-bar bound by an operator.

Assuming that the gap is an empty operator and that *aw* is a raising verb, Nishigauchi proposes the following derivation.

(30)



Adopting (30), he explains the derivation of (31) in the following way: first, as in (31a), the NP in the subject position of V1 moves to [Spec, *aw*] via an NP movement and the NP gets a distributive interpretation from *aw* due to Spec-head agreement, and then the operator moves to an A-bar position where *aw* governs, and then the subject NP is adjoined to IP by QR. As a result, there occur two variables t'_0 and t_1.

(31) John-to Mary-ga aisi-aw-teiru.
John-and Mary-Nom love-meet-ing
'John and Mary love each other.'

a. $[_{VP0}$ [John to Mary]$_0$ $[_{VP1}$ Op$_1$ $[_{VP1}$ t_0 t_1 aisi]-aw]-te iru]

b. [John to Mary]$_0$ $[_{VP0}$ t'_0 $[_{VP1}$ Op$_1$ $[_{VP1}$ t_0 t_1 aisi]-aw]-te iru]

(Nishigauchi (1992: 172-173) with slight modification)

So far, I have seen Nishigauchi's (1992) analysis where the *aw*-construction is a syntactic V-V compound and the gap is regarded as an empty operator. I have also seen that when *otagai* allows split antecedents, there occurs an extraposition of Comitative *to* phrase as illustrated in (27).

2.3.2. Some Problems

This section points out some problems with Nishigauchi's analysis of the *aw*-construction.

Nishigauchi argues that (26) does not violate **Split Antecedent*, proposing the derivation illustrated in (27). However, this analysis has an empirical problem. This is illustrated in the following example where *otagai* and *aw* co-occur in a single sentence. Recall that when *otagai* occurs in the *aw*-construction, it can be marked either with Accusative case or Dative case. However, when the antecedents of *otagai* are split, only Accusative case is allowed. The extraposition analysis predicts that *otagai* with Dative case can be bound by the matrix subject *[t John]* in the same way as the Accusative counterpart, contrary to fact.

(32) a. John-ga Bill-to otagai-o naguri-aw-ta.
John-Nom Bill-with e.o.-Acc hit-meet-Past
'John and Bill hit each other.'

b. [t_i John] ga [Bill to]$_i$ otagai o naguri-aw-ta.

(33) a. ? John-ga Bill-to otagai-ni naguri-aw-ta.
John-Nom Bill-with e.o.-Dat hit-meet-Past
'(lit.) John and Bill hit the each other.'

b. [t_i John] ga [Bill to]$_i$ otagai ni naguri-aw-ta

In this section, I have seen Nishigauchi's (1992) analysis of the *aw*-construction. It has shown that (i) V1+*aw* is a syntactic V-V compound in Kageyama's (1993) sense, (ii) the gap in the *aw*-construction is an operator, and that (iii) (26) is derived by virtue of extraposing the Comitative phrase *[Bill to]*. I argued that the null operator analysis of the gap and the extraposition analysis cannot be on the right track, showing an empirical problem.

2.4. Yumoto (2005)

This section summarizes Yumoto's (2005) analysis of the *aw*-construction, where the *aw*-construction is formed by the direct merging of two verbs, and then shows that her analysis has an empirical problem regarding the scope relation between *aw* and an adverb.

2.4.1. Basic Ideas

Her claim is based on the following observation, namely, the subject or the object of the *aw*-construction cannot be c-commanded by *aw*.

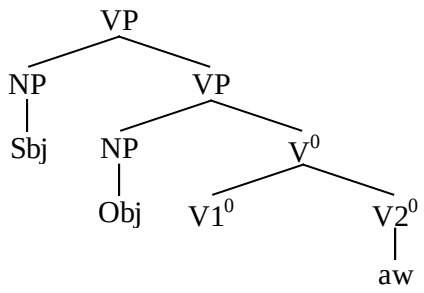
(34) a. Kyoodai hutari-no subete-no syutyoo-ga mujunsi-aw-teiru.
brothers two-Gen every-Gen claim-Nom contradict-meet-ing
'Every claim of the older brother and every claim of the younger brother contradict to each other.'

b. Hutari-wa ryoohoo-no te-o nigiri-aw-ta.
two-Top both-Gen hand-Acc hold-meet-Past
'The two held both of each other's hands.' (Yumoto (2005: 200))

(34a) cannot indicate that every claim of the older brother contradicts each of his other claim, and the same is true for the younger brother's claim. (34a) must indicate that every claim of the older brother and every claim of the younger brother are in one-to-one relations where one is in contradiction to the other. Similarly, (34b) cannot indicate that each of the two held their own hands. It must indicate that one holds both of the other's hands with both of his hands and vice versa. Yumoto claims that those interpretations arise only if the quantifier of the subject or the object of the *aw*-construction takes wider scope over *aw*.

To explain this fact, Yumoto proposes a new type of syntactic V-V compound, where a complex predicate is formed by directly merging two verbal heads (cf. Saito and Hoshi 1998), as illustrated in (35).

(35)



The semantics of (34), where *aw* always has narrow scope, follows straightforwardly from this structure, since V1 cannot be a phrase with its object or subject.

This section has reviewed Yumoto's (2005) analysis of the *aw*-construction. It has been shown that the *aw*-construction is formed by a direct merger of two verbal heads, V1 and *aw*, hence the subject or the object of this configuration always takes scope over *aw.*

2.4.2. Some Problems

This section points out an empirical problem of Yumoto's V^0 merger analysis of the *aw*-construction. See the example (36). (36) can be construed in two ways as shown in (36a,

b). In (36a), *nikai* 'twice' has narrow scope with respect to *aw*, whereas in (36b) it has wide scope with respect to *aw*.

(36) John-to Bill-ga nikai naguri-aw-ta.
John-and Bill-Nom twice hit-meet-Past
a. 'John hit Bill twice and Bill hit John twice.'
b. 'A mutual hitting event between John and Bill occurred twice.'

I can explain this ambiguity postulating the following structures. In (37a), *nikai* modifies VP1 whereas in (37b), it modifies VP2.

(37) a. John to Bill ga [$_{VP2}$[$_{VP1}$ nikai naguri] aw] ta
b. John to Bill ga [$_{VP2}$ nikai [$_{VP1}$ naguri] aw] ta

Yumoto's V^o merger analysis is compatible with the (b) reading of (36) since the adverb adjoins to VP2 after the head-head merger of V1 and *aw*. However, her analysis is incompatible with the (a) reading. To have a narrow scope reading with respect to *aw*, the adverb has to adjoin to V1 before V1 merges with *aw*. Therefore, I propose that the complement of *aw* should be a phrase rather than a head, and this is not allowed in Yumoto's V^o merger analysis.

In this section, I have seen Yumoto's (2005) analysis of the *aw*-construction, in which V1+*aw* is formed in the syntax via a direct merger of the two verbs, and I have provided a piece of evidence which shows that the sister of *aw* should not be a head but a phrase.

Before moving onto the next section, let me summarize the problems of the previous studies of the *aw*-construction. First, Ishii's (1989) analysis is problematic, since he treats -

the affixation of *aw* to V1 as a lexical operation. Second, although Yumoto (2005) classifies the *aw*-construction as a syntactic V-V compound, her analysis cannot explain the ambiguity of (36). Third, I have also seen that Ishii's and Nishigauchi's analysis of *otagai* with split antecedents are not on the right track since they cannot explain the contrast exemplified in (6), namely, they cannot explain why *otagai* allows split antecedents if it is marked with Accusative case but not with Dative case. I will focus on this question in the next section.

3. *Otagai* in the *Aw*-Construction

This section provides a new syntactic analysis of the *aw*-construction. It will be shown that (i) the *aw*-construction has a bi-clausal structure, (ii) *pro* resides in [Spec, *v*P] in the embedded clause, (iii) the gap in the object position of V1 in the *aw*-construction is a phonetically null anaphor which is subject to Condition (A) of Binding Theory, (iv) and that *otagai* has to be licensed in an argument position of either V1 or *aw*. Now, for the first approximation, I propose the structure (39a, b) for the two simple cases of the *aw*-construction (38a, b), adopting the syntactic V-V compound analysis of the *aw*-construction.[21]

---

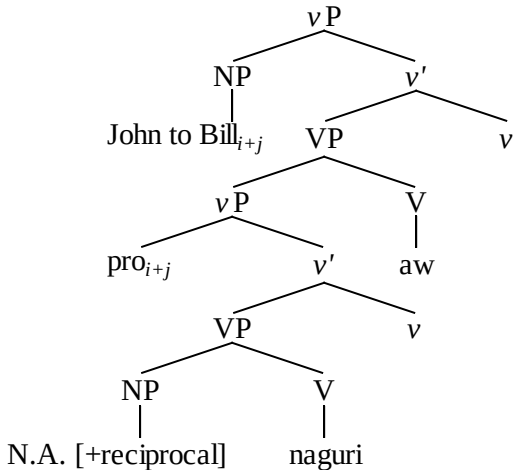
[21] Although it is abstracted away in the present structures, we also claim that there is a null reciprocator in an argument position of *aw* in the non-split configuration (39a) just as in (19). The following example where *otagai* is reduplicated seems to be an overt counterpart. we suppose that the Dative-marked *otagai* occurs in an argument position of *aw* while the Accusative-marked *otagai* occurs in an argument position of V1 *naguru* 'hit'.

(i) John-to Bill-ga otagai-ni otagai-o naguri-aw-ta.
John-and Bill-Nom e.o.-Dat e.o.-Acc hit-meet-Past
'John and Bill hit each other.'

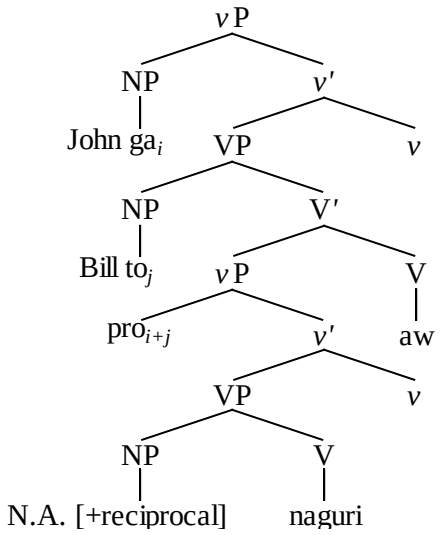
(38) a. John-to Bill-ga naguri-aw-ta.
John-and Bill-Nom hit-meet-Past
'John and Bill hit each other.'

b. John-ga Bill-to naguri-aw-ta.
John-Nom Bill-with hit-met-Past
'John and Bill hit each other.'

(39) a.



b.



Note that the current analysis differs from Yumoto's (2005) analysis in that a phrase, rather

than a head occurs as a complement of *aw*, allowing us to explain the ambiguity in (36) (we can get the two structures illustrated in (37)).

In what follows, I will explain these structures in detail with some modification in a step by step fashion.

3.1. Unification of the Split Antecedents

I need to explain why (6) can avoid **Split Antecedents.* I have already seen that both Ishii's and Nishigauchi's analysis has problems when they come across *otagai* in the *aw*-construction. I propose here that *pro* rather than PRO resides in the subject position of the embedded verb to unify the split indices into one. There is a relevant example offered by Hornstein (1999) which shows that *pro* can unify split indices into one.

(40) a. John$_i$ told Mary$_j$ [that [[pro$_{i+j}$ washing each other] would be fun.]]

b. * John$_i$ told Mary$_j$ [PRO$_{i+j}$ to wash each other.]

(Hornstein (1999: 73) with slight modification)

In a non-obligatory control (NOC) configuration like (40a), split antecedents are allowed, whereas in an obligatory control (OC) configuration like (40b), they are not allowed. This fact shows that NOC *pro* can unify split indices into one, whereas OC PRO cannot. We can see the same contrast in Japanese as well: the split antecedents are allowed in the NOC configuration as illustrated in (41a) whereas it is not allowed in the OC configuration as illustrated in (41b.)

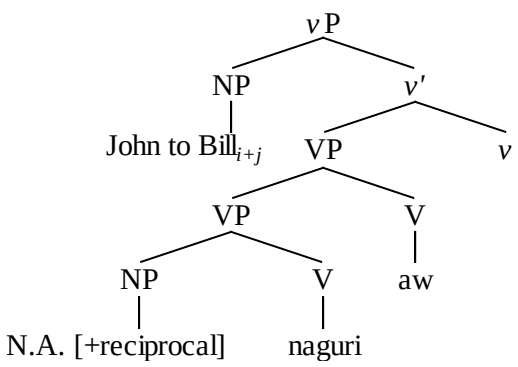
(41) a. John-ga$_i$ Bill-ni$_j$ [pro$_{i+j}$ otagai-o hihansuru koto-ga daiji da]
John-Nom Bill-Dat e.o.-Acc criticize that-Nom important be
to it-ta.
that say-Past
'John told Bill that criticizing each other is important'

b. * John-ga$_i$ Bill-ni$_j$ [PRO$_{i+j}$ otagai-o hihan-suru] youni it-ta.
John-Nom Bill-Dat e.o.-Acc criticize-do to say-Past
'(lit.) John told Bill to criticize each other.'

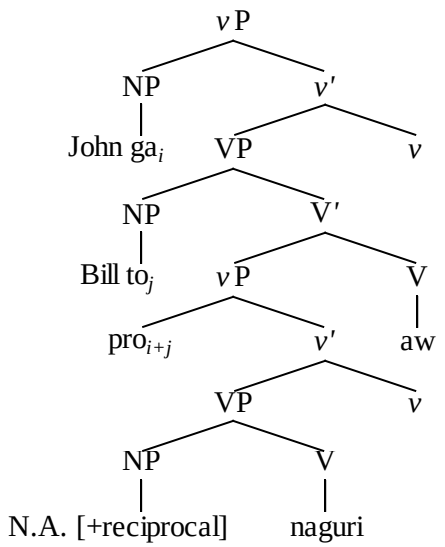
Now, let us go back to the structure (39b) where the antecedents of the gap are split. In (39b), the split indices are unified in the same way as in (40a), and the null anaphor is bound by *pro*, satisfying Condition (A).

However, (39a) seems to be problematic. Since *pro* is a pronominal, it falls in a Condition (B) realm, but the matrix subject and *pro* are assigned the same index. I propose that *aw* selects VP or *v*P depending on whether the subjects are split or not. *Aw* selects a VP complement, just like Kageyama's (1993) classification of syntactic V-V compounds, if the antecedents of the gap are not split as illustrated in (42a), whereas it selects *v*P as its complement if the antecedents of the gap are split as illustrated in (42b). (42a) does not violate Condition (B), since the reciprocal anaphor is directly bound by the subject.

(42) a.



b.



There is a good reason to believe that *aw* can take *v*P or VP complement depending on whether its subjects are split or not, and when it takes *v*P complement, *pro* resides in [Spec, *v*P] and unifies split indices into one. Consider the contrast illustrated in example (43). When subject honorification is applied to the complex predicate *naguri-aw*, it gives rise to an acceptable sentence as in (43a), while the acceptability degrades when subject honorification is applied only to V1 *naguru* as in (43b).[22]

(43) a. Sensei$_i$-ga seito$_j$-to o-naguri-ai-ninat-ta.
teacher-Nom student-with hit-aw-past
'The teacher and the student hit each other.'

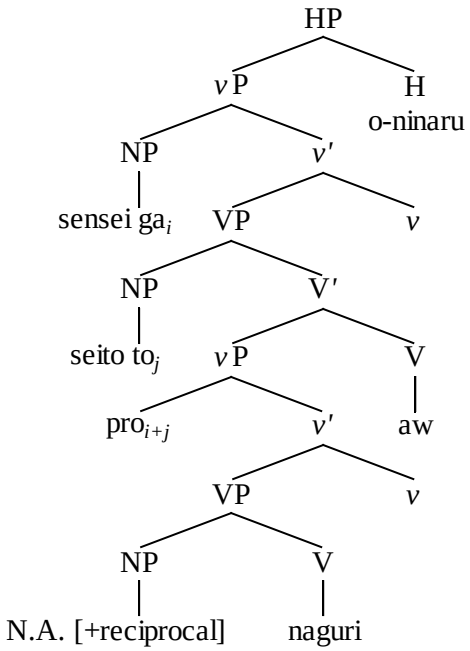
b. ?? Sensei-ga seito-to o-naguri-ninari-aw-ta.
teacher-Nom student-with hit-aw-Past
'The teacher and the student hit each other.

The difference between (43a) and (43b) is exactly what the current analysis predicts.

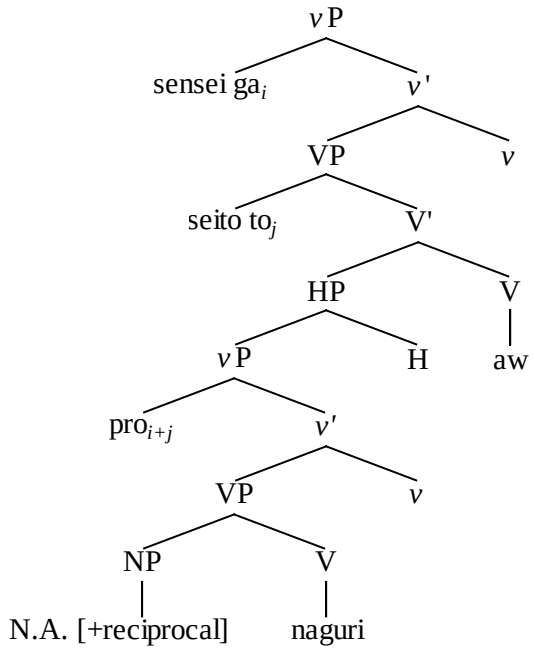
[22] An anonymous reviewer of *English Linguistics* asked me as to why (43b) is slightly better than (45), but for me (43b) is also hardly acceptable, and we focused on the difference between (43a) and (43b) here.

Assuming that subject honorification in Japanese is triggered by an agreement between a honorific head (H) and its associated [Spec, *v*P] as put forth by Kishimoto (2012), we propose the following two structures, (44a, b) for (43a) and (43b), respectively.

(44) a.



b.



In (44a), the honorific head merges with the higher *v*P, and agrees with [Spec, *v*P], *sensei*, 'the teacher' which can be the target of honorification, resulting in an acceptable sentence. On the other hand, in (44b), the honorific head merges with the lower *v*P. In this case, pro_{i+j}, rather than *sensei* is in an agreement relation with the honorific head, resulting in an ill-formed sentence. I could assume that (43b) is ill-formed, because the subject of *naguru* is not *sensei* but pro_{i+j}, namely, 'the teacher and the student', and the student cannot be a target of honorification. Note that in (45), 'the teacher and the student' cannot trigger subject honorification.

(45) * Sensei-to seito-ga hon-o o-yomi-ninat-ta.
teacher-and student-Nom book-Acc read-Past
'The teacher and the student read the book.'

However, it seems that the ill-formedness of (43b) is not because *pro* includes *seito*, which cannot trigger subject honorification. The following example, (46), where both of the antecedents of *pro* can trigger subject honorification, is also unacceptable.[23]

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[23] It should be noted that the non-split counterpart of (46) also sounds awkward even though *pro* does not occur in this configuration.

(i) ??Yamada-sensei-to Tanaka-sensei-ga onaguri-ai-ninat-ta.
Yamada-Prof.-and Tanaka-Prof.-Nom hit-meet-past
'(lit.) Prof. Yamada and Prof. Tanaka hit each other.'

This example is ruled out for a different reason. According to Kishimoto (2012), the honorific head can only agree with [Spec *v*P], but V1 in (i) does not project *v*P; hence subject honorification to V1 cannot occur in (i).

(46) ??Yamada-sensei$_i$-ga Tanaka-sensei$_j$-to [*pro*$_{i+j}$ o-naguri-ninari]-aw-ta.
Yamada-Prof-Nom Tanaka-Prof-with hit-meet-Past
'(lit.) Prof. Yamada and Prof. Tanaka hit each other.'

Alternatively, I propose that (43b) and (46) are excluded because NOC *pro* cannot trigger subject honorification. (47) shows this point. The subject of the embedded sentence should be NOC *pro* in Hornstein's (1999) sense: an empty subject is NOC *pro* when occurring in CP whereas it is an NP trace when occurring in IP.

(47) a. Yamada-sensei-wa [dooyatte densya-ni *pro* noru ka] o-wasure-ninat-ta.
Yamada-Prof.-Top how train-Dat get.on Comp forget-past
'Prof. Yamada forgot how to get on a train.'

b. ??Yamada-sensei-wa [dooyatte densya-ni *pro* o-nori-ninar ka]
Yamada-Prof-Top how train-Dat get.on Comp
o-wasure-ninat-ta.
forget-Past
'(lit.) Prof. Yamada forgot how to get on a train.'

I can apply subject honorification to the matrix verb whose subject is *Yamada-sensei* 'Prof. Yamada' as illustrated in (47a) whereas applying subject honorification to the embedded verb whose subject is *pro* gives rises to an ill-formed sentence. I can exclude (43b) and (46) for the same reason that (47b) is ill-formed, and I can support the current analysis in which *pro* resides in [Spec, *v*P] when *aw* selects a *v*P complement.

3.2. The Notion of Null Anaphor in Nakamura (1996)

Finally, I have to explain the nature of the gap. This section summarizes Nakamura's (1996) discussion of the *tough* construction, in order to motivate the null anaphor analysis of the gap in the *aw*-construction.

Before Nakamura (1996), the gap in the *tough* construction was regarded as an empty operator as illustrated in (48a-c).

(48) a. John is easy to please.

b. John is easy [[PRO to please OP]].

c. John is easy [OP_i [PRO to please t_i]] (Nakamura (1996: 233))

Nakamura points out some problems for the empty operator analysis: if there is an empty operator movement in the *tough* construction, it is predicted that this construction should be exempted from the A-over-A (AOA) principle violation. However, violation of the AOA principle is observed in the *tough* construction as illustrated in (49).

(49) a. * $John_i$ is fun to see [pictures of t_i]

b. [Pictures of John]$_i$ are fun to see t_i (*ibid.:* 234)

In contrast, overt *wh*-movement does not violate the AOA principle as illustrated in the following example.

(50) a. Who_i did you see [picture of t_i]

b. * $John_i$ was seen [pictures of t_i] (*ibid.*)

Nakamura states that this property is quite similar to what can be seen in NP movement rather than *wh*-movement, and introduces a new notion of null anaphor (N.A.) and shows (51) as a derivation of the *tough* construction.

(51) a. John is easy [[e] to [PRO please N.A.]].

b. John is easy [[N.A.$_j$] to [PRO please t_j]]. (*ibid.:* 235)

Now recall that Nishigauchi (1992) proposes that the gap in the *aw*-construction is an empty operator, showing (28) and (29) (repeated here as (52) and (53) respectively).

(52) ? [John-to Mary]$_i$-ga [zibun-no sensei-tati$_j$-ga [e]$_{i/*j}$hometa to]
John-and Mary-Nom self- Gen teacher-Pl-Nom praise-past Comp
zyasui-si-aw-ta.
suspect-meet-past
'John and Mary each suspected that self's teachers praised the other.'

(53) [John-to Mary]$_i$-ga [sensei-tati$_j$-ga [e]$_{*i/j}$ home-aw-ta to] zyasui-si-ta.
John-and Mary-Nom teacher-Pl- Nom praise-meet-past Comp suspect-past
'John and Mary suspected that teachers praised each other.'

According to Nishigauchi, (52) and (53) show violation of Condition (A) and (B), respectively. However, notice that the acceptability degrades in (52) (for me (52) is worse than '?' and hardly acceptable under the intended meaning). If the gap is a null anaphor rather than an empty operator, the degradation in (52) follows straightforwardly from Condition (A).

In this section, I have reviewed Nakamura's (1996) analysis of the *tough*-construction,

where the gap is reanalyzed as a null anaphor rather than an empty operator, and I have shown that the gap in the *aw*-construction should also be a null anaphor, contra Nishigauchi's (1992) empty operator analysis.

3.3. Non-Anaphoric Nature of *Otagai*

So far, I have treated *otagai* as an anaphor, but it should be noted that *otagai* is sometimes non-anaphoric by nature. With example (54), where *otagai* is bound by split antecedents, Hoji (2003) argues that *otagai* is not an anapor.[6, 24]

(54) Ieyasu$_1$-wa Nobunaga$_2$-ni [Shingen-ga sineba[otagai$_{1+2}$-no ryoodo]-ga
Ieyasu-Top Nobunaga-Dat [Shingen-Nom die-if each.other-Gen territory-Nom
sibarakuwa antaida to] tugeta.
for.a.while is.safe that told
'Ieyasu$_1$ told Nobunaga$_2$ that, if Shingen dies, their$_{1+2}$ teritories will be safe for a while.'

However, *otagai* in (54) does not have a reciprocal interpretation. Presumably, there are at least two types of *otagai*; one is an anaphor which has a reciprocal interpretation, and the other is a pronoun, without a reciprocal interpretation. All instances of *otagai* to be dealt with in this article are reciprocal; hence I continue to regard *otagai* as an anaphor.

3.4. A New Syntactic Analysis of the *Aw*-Construction

Now we are ready to discuss the contrasts observed in the first section. Let me repeat the main issue of this article. Japanese has two options to indicate reciprocity: one makes

[24] I thank an anonymous *EL* reviewer for informing me of this problem.

use of a reciprocal anaphor *otagai* and the other makes use of the *aw*-construction. Recall that *otagai* basically does not allow split antecedents as illustrated in (55b).

(55) a. John-to Bill-ga otagai-o nagut-ta.
John-and Bill-Nom e.o.-Acc hit-Past
'John and Bill hit each other.'

b. * John-ga Bill-to otagai-o nagut-ta.
John-Nom Bill-with e.o.-Acc hit-Past
'John and Bill hit each other.'

(56) John-to Bill-ga naguri-aw-ta.
John-and Bill-Nom hit-meet-Past
'John and Bill hit each other.'

When *otagai* occurs in the *aw*-construction, it can be marked either with Accusative case or Dative case as in (57).

(57) a. John-to Bill-ga otagai-o naguri-aw-ta.
John-and Bill-Nom e.o.-Acc hit-meet-Past
'John and Bill hit each other.'

b. John-to Bill-ga otagai-ni naguri-aw-ta.
John-and Bill-Nom e.o.-Dat hit-meet-Past
'John and Bill hit each other.'

However, split antecedents are possible with the Accusative object but not with the Dative argument, as illustrated in (58).

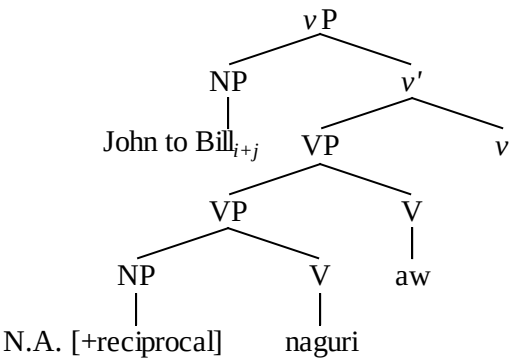
(58) a. John-ga Bill-to otagai-o naguri-aw-ta.
John-Nom Bill-with e.o.-Acc hit-meet-Past
'John and Bill hit each other.'

b. ? John-ga Bill-to otagai-ni naguri-aw-ta.
John-Nom Bill-with e.o.-Dat hit-meet-Past
'(lit.) John and Bill hit each other.'

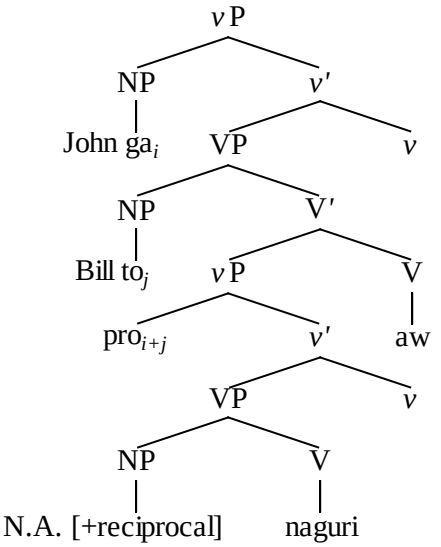
Ishii (1989) and Nishigauchi (1992) explain the difference between (55b) and (58a) in different ways. Ishii argues that *otagai* loses its syntactic role as an anaphor when it occurs in the *aw*-construction; hence it allows split antecedents. Nishigauchi argues that (58a) arises as a result of extraposing the Commutative phrase *Bill to* from *[John to Bill]* and *otagai* is bound by the subject NP which contains the trace of *Bill to* namely, *[t John]* without violating Condition (A). However, Ishii and Nishigauchi cannot explain why the acceptability degrades when *otagai* is marked with Dative case.

Alternatively, I propose (59) and (60) as two basic structures of the *aw*-construction. (59) has non-split antecedents and (60) has split antecedents. There is no problem for (59), since the antecedents of the gap are not split. (60) is also acceptable, although the antecedents of the gap are split since *pro* can unify indices of split antecedents into one.

(59)

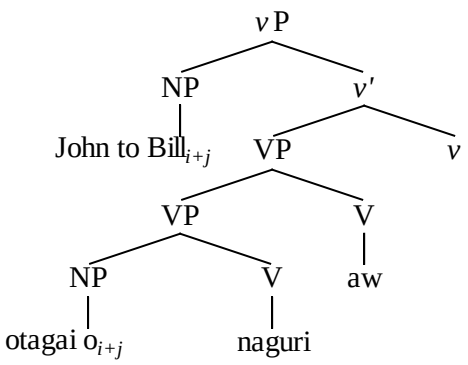


(60)

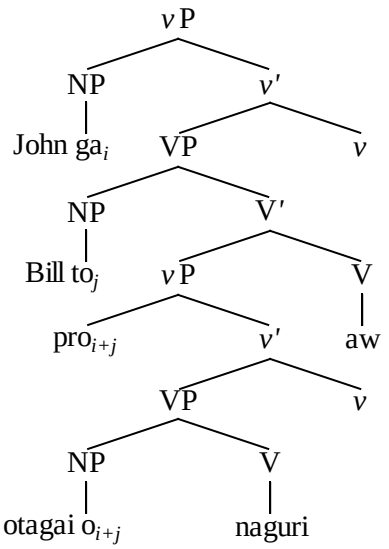


Let us take a look at (57a) and (58a) where *otagai* which is marked with Accusative case occurs in the *aw*-construction. Their structures are shown in (61) and (62). (61) has no problem with respect to **Split Antecedents* since the antecedents of *otagai* are not split. (62) also has no problem since *pro* unifies split indices and *pro* binds the reciprocal anaphor *otagai*, satisfying Condition (A) and (B) at the same time.

(61)

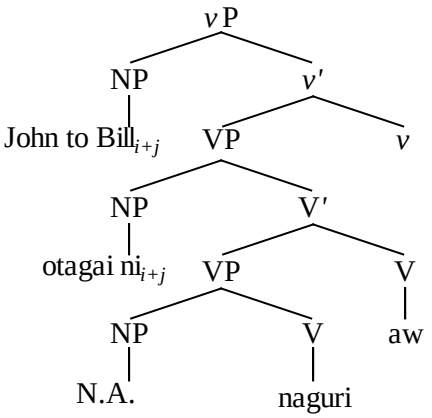


(62)



Let us move onto the contrast between (57b) and (58b), where *otagai* is marked with Dative case. First, let us discuss (57b), whose structure is (63). (63) is grammatical because the antecedents of *otagai* are not split. However, we propose here that *otagai* with Dative case occurs in an argument position of *aw* rather than one in V1, since *aw* can license either a *to* phrase or a *ni* phrase in its argument position as illustrated in (64).

(63)

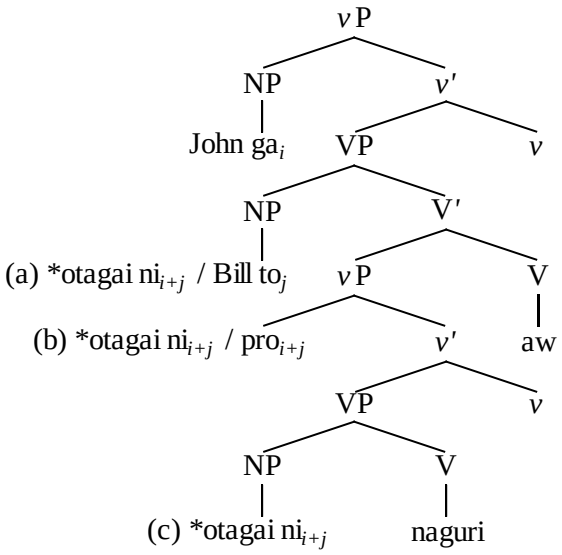


(64) a. Sono huku-wa kono tokei-to aw-u.
that cloth-Top this watch-with meet-Pres
'That cloth matches the watch.'

b. Sono huku-wa kono tokei-ni aw-u.
that cloth-Top this watch- Dat meet-Pres
'That cloth matches the watch.'

Next, let us discuss the example with the split antecedents, (58b), whose structure (65) is ungrammatical, since there is no place for *pro* to reside in (65). *Otagai ni* cannot occur in (65a) because this position is already filled with the commutative *to* phrase. It cannot occur in (65b) either, since *pro* has to be here. If *otagai ni* occurs in this position, the split indices cannot be unified into one and this gives rise to a violation of **Split Antecedents*. *Otagai* cannot occur in (65c) either, since the V1 *naguru* 'hit' cannot license an NP with Dative case as exemplified in (66).

(65)



(66) a. John -ga Bill-o nagut-ta.
John-Nom Bill-Acchit-Past
'John hit Bill.'
b. * Jonn-ga Bill-ni nagut-ta.
John-Nom Bill-Dat hit-Past
'(lit.) John hit Bill.'

Note that (65c) is not possible because of the case licensing of V1. Consequently, it is predicted that if V1 can independently license an NP with Dative case, it gives rise to a grammatical sentence. This is in fact the case. See the following examples. The verb *nageru* 'throw' can license a Dative marked NP as in (67).

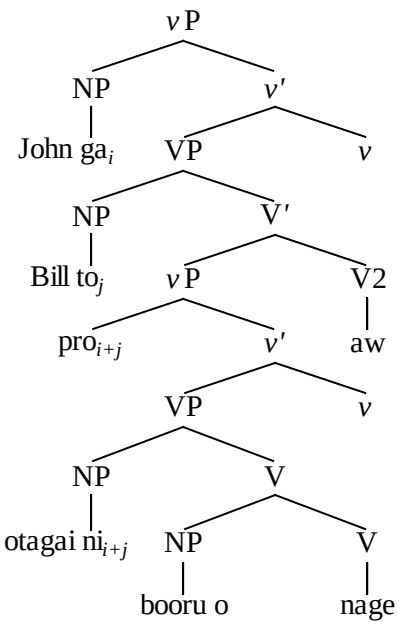
(67) John-ga Bill-ni booru-o nage-ta
John-Nom Bill- Datball-Acc throw-Past
'John threw a ball to John.'

With this verb, *otagai ni* allows split antecedents in the *aw*-construction as illustrated below.

(68) John-ga Bill-to otagai-ni booru-o nage-aw-ta.
John-Nom Bill-with e.o.-Dat ball-Acc throw-meet-Past
'John and Bill threw a ball to each other.'

I propose (69) as the syntax of (68). Here, *pro* unifies the split indices into one, and *otagai ni*, which occurs in the argument position of *nageru* 'throw', is bound by *pro*.

(69)



3.5. A Problem regarding the Licensing of *Otagai*

I have proposed in the previous section that *otagai* has to be licensed either in the argument position of V1 or V2. One may wonder why *otagai-to* cannot occur in the *aw*-construction as illustrated in (71), since I have seen that *aw* 'meet' as a single verb can license a *to* 'with' phrase as its argument as in (64a) (repeated here as (70)).[25]

(70) Sono huku-wa kono tokei-to aw-u.
that cloth-Top this watch-with meet-Pres
'That cloth matches the watch.'

(71) ??John-to Bill-ga otagai-to naguri-aw-ta.
John-and Bill-Nom e.o.-with hit-meet-past
'(lit.) John and Bill hit each other.'

[25] I am grateful to Yoshiki Ogawa for informing me of this problem.

However, we have a grammatical sentence when *otagai-to* occurs in an embedded clause as illustrated in (72), just like the contrast illustrated in (20).

(72) ? John-to Bill-ga [otagai-to naguri-ai-tai to] omot-teiru.
John-and Bill-Nom e.o.-with hit-meet-want Comp think-Pres
'John and Bill want to hit each other.'

I leave open the question why *otagai-to* can only occur in certain types of embedded clause, but it seems safe to conclude that *otagai* has to be licensed either in an argument position of V1 or V2.

4. The Semantics of the *Aw*-Construction

This section is concerned with the semantics of the *aw*-construction. It will be shown that *aw* has a function to unify plural events into a single coextensive event, a notion to be defined below. I will also propose that symmetric events and reciprocal events should be distinguished in terms of their event times.

4.1. Reciprocal Expressions in English and Japanese

English has two ways to indicate reciprocity between plural subjects: one makes use of *each other* as in (73a) and the other makes use of *each-the-other* as in (73b).

(73) a. John and Bill slapped each other.
b. John and Bill each slapped the other.

Fiengo and Lasnik (1973) point out that there is a semantic difference between *each other* and *each-the-other*: *each-the-other* can indicate that plural events occur at different times whereas *each-other* cannot.

(74) a. Each of the cars bumped into the other; the Pontiac bumped into the Plymouth on Monday, and the Plymouth bumped into the Pontiac on Tuesday.

b. The cars bumped into each other; *the Pontiac bumped into the Plymouth on Monday, and the Plymouth bumped into the Pontiac on Tuesday.

(Fiengo and Lasnik (1973: 450-451))

The same contrast is seen between Japanese reciprocal expressions, *otagai* and the *aw*-construction. (75a) can indicate that John's action of hitting Bill and Bill's action of hitting John occur at different times and at different places. On the other hand, (75b) can only indicate that John's action and Bill's action occur at the same time and at the same place.[26]

[26] There are some examples of the *aw*-construction which do not require coextensiveness. For example, in (i), John's action and Bill's action do not have to occur at the same time and at the same place, although they are construed as a single event.

(i) John-to Bill-ga hihan-si-aw-ta.
John-and Bill-Nom criticize-do-meet-Past
'John and Bill criticized each other.'

(75) a. Kinoo, John-to Bill-ga otagai-o nagut-ta.
yesterday John-and Bill-Nom e.o.-Acc hit-Past
'Yesterday, John and Bill hit each other.'

b. Kinoo, John-to Bill-ga naguri-aw-ta.
yeaterday John-and Bill-Nom hit-meet-Past
'Yesterday, John and Bill hit each other.'

I will propose that (i) symmetric events and reciprocal events should be distinguished from each other and that (ii) *aw* unifies plural events into a single *coextensive event* to explain the contrast in (75). Hereafter, I will use the term *coextensive event* in the following sense.

(76) Coextensive Event

A *Coextensive event* is a set of events which share the same predicate and occur in the same spatio-temporal extent.

4.2. Some Difference between Symmetric Events and Reciprocal Events

This section shows a certain difference between symmetric events and reciprocal events. According to Ishii, the affixation of *aw* to V1 makes a symmetric predicate. However, there are some differences between symmetric events and reciprocal events. See the following examples. (77) is an example of Japanese symmetric predicate *kekkonsuru* 'marry'. Interestingly, this predicate can co-occur with *aw* as illustrated in (78).

(77) Nizyuudai-no danzyo-ga kekkonsi-ta.
twenties-Gen man.and.woman-Nom marry-Past
a. 'A couple got married.'
b. 'Some couples got married.'

(78) Nizyuudai-no danzyo-ga kekkonsi-aw-ta.
twenties-Gen man.and.woman-Nom marry-meet-Past
a. '*A couple got married.'
b. 'Some couples got married.'

If the affixation of *aw* makes V1 a symmetric predicate from a non-symmetric predicate, why can *aw* be attached to *kekkonsuru* which is a symmetric predicate on its own? Note here that there is a semantic difference between (77) and (78). Since Japanese does not distinguish between a plural form and a singular form of a noun, (77) is ambiguous between (a) and (b). On the other hand, (78) is acceptable only under the (b) reading.

Another difference between symmetric events and reciprocal events is exemplified in (79). (79a-c) are examples including a symmetric predicate, *otagai* and the *aw*-construction, respectively. When I put in the adverb *gokai-zutu* 'five times respectively', I can see a difference between reciprocal events and symmetric events. See the contrast between (79a) and (79b). (79a) becomes unacceptable with the adverb. On the other hand, we can count the number of times John's actions and Bill's actions occur, using *gokai-zutu* in (79b). Now take a look at (79c), an example of the *aw*-construction. If V1+*aw* were a symmetric predicate as Ishii put forth, it would be predicted that (79c) should be ungrammatical for the same reason that (79a) is ruled out. However, (79c) is perfectly grammatical.

(79) a. John-to Mary-ga (*gokai zutu) kekkon-si-ta
John-and Mary-Nom five-times respectively marry-do-Past
'John and Mary got married five times respectively.'

b. John-to Bill-ga otagai-o (gokai zutu) nagut-ta.
John-and Bill-Nom e.o.-Acc five-times respectively hit-Past
'John and Bill hit each other five times.'

c. John-to Bill-ga (gokai zutu) naguri-aw-ta.
John-and Bill-Nom five-times respectively hit-meet-Past
'John and Bill hit each other five times.'

To capture the contrast in (79a-c), I propose that symmetric events and reciprocal events should be distinguished in the following way.

(80) Reciprocal Event

A reciprocal event consists of at least a set of counterdirectional events, where plural subjects have the same mutual impact on each other, and spatio-temporal identity is not required between the plural events.

(81) Symmetric Event

A symmetric event is a single mutual event in which multiple subjects are involved.

Given these definitions, I can formalize the semantics of a reciprocal event and a symmetric event as in (82) and (83), respectively. In (82), the event arguments of John's action and Bill's

action are bound by different operators; accordingly, they can occur at different times and at different places. On the other hand, (83) is construed as a single event since there is only one event argument.

(82) John-to Bill-ga otagai-o nagut-ta.
John-and Bill-Nom e.o.-Acc hit-Past
'John and Bill hit each other.'
$\exists e_1, e_2[(\text{hit } (e_1, \text{Bill, John})) \wedge (\text{hit } (e_2, \text{John, Bill}))]$

(83) John-to Mary-ga kekkon-si-ta.
John-and Mary-Nom marry-do-Past
'John and Mary got married.'
$\exists e_1[(\text{marry (Mary, John, } e_1)) \wedge (\text{marry (John, Mary, } e_1))]$

Now I can explain the contrast among (79a-c) as follows. Since reciprocal events like (79b, c) consist of at least two sub-events, *John hit Bill* and *Bill hit John*, each event can be modified by using z*utu* 'respectively' when the number of the two sets of events are identical. On the other hand, since symmetric events like (79a) consist of a single event between John and Mary, there can be no division into sub-events, and therefore there can be no modification with *zutu*.

4.3. *Aw* as a Coextensivizer

So far, I have seen that symmetric events and reciprocal events should be distinguished with respect to their event times. However, I still cannot explain why, in an *aw*-construction like (75b), spatio-temporal identity is required and why (78) has only the (b) reading. To

capture this fact, I propose that *aw* has the following function.

(84) a. *Aw* selects VP (or *v*P) which indicates plural events.

b. *Aw* unifies plural events into a single coextensive event.

Now I can explain the contrast in (75). (75a) and (75b) are both reciprocal events, but in (75b), the sub-events are unified into a single coextensive event by virtue of *aw*. I can also explain why (78) has only the (b) reading. Since *aw* selects plural events, (78a), which contains only one symmetric event, is not allowed, whereas (78b), which contains multiple symmetric events, is consistent with the function of *aw*.

I can further attest this function of *aw* by the following examples. In (85a), spatio-temporal identity is not required, so the sub-events, namely John's and Bill's hitting actions, can be modified by different spatial PPs *kenkyuusitu de* 'at the laboratory' and *syoko de* 'at the library'. In the *aw*-construction, however, John's and Bill's actions cannot be modified by different PPs because *aw* unifies plural events into a single coextensive event.

(85) a. John-ga kenkyuusitu de, Bill-ga syoko de otagai-o nagut-ta.
John-Nom laboratory at Bill-Nom library at e.o.-Acc hit-Past
'John at the laboratory and Bill at the library hit each other.'

b. * John-ga kenkyuusitu de, Bill-ga syoko de naguri-aw-ta.
John-Nom laboratory at Bill-Nom library at hit-meet-Past
'(lit.) John at the laboratory and Bill at the library hit each other.'

This section has discussed semantic differences between the two reciprocal expressions in Japanese, namely, *otagai* and the *aw*-construction. This section has also discussed semantic

differences between symmetric events and reciprocal events. It has been shown that *aw* has a function to combine plural counterdirectional events, which share the same predicate into a single coextensive event, and it was suggested that symmetric events and reciprocal events should be distinguished in terms of their event times.

5. A Historical Perspective]

5.1. Observation

The first usage of the *aw*-construction can be seen in *Manyoshu*. This is a coextensive usage of the *aw*-construction. It seems all instances of V-*aw* up to 1642 were the coextensive ones.[27]

(86) Kawa nami-no tati-aw sato
river stream-Gen stand-meet village
'the village where rivers gather' (759: *Manyoshu*)

In 1642, the first usage of the *aw*-construction with *otagai* occurred.

(87) … tagai-ni tataki-aw
e.o.-Dat slap-meet
'slap each other' (1642: *Toraakira-bon*)

Then in 1703, the first usage of the *aw*-construction which has a reciprocal interpretation without *otagai*.

[27] This fact seems to be consistent with our assumption that *aw* in contemporary Japanese is a coextensivizor, rather than a reciprocator.

(88) … naguri-awi, neji-awi, tataki-aw-u.
hit-meet grapple-meet slap-meet-Pres
'hit, grapple and slap each other' (1703: *Sonezaki Shinju*)

Finally the first usage of *otagai-o* in the *aw*-construction occurred in 1925 as in (92).

(89) otagai-o kutujoku-si-awi…
e.o.-Acc humiliation-do-meet
'humiliate each other' (1925: *Taiyo*)

Otagai, by the way, occurred first in 900 as illustrated in the following example.

(90) mikokoro-o tagai-ni nagusame-tamau hodoni , mitose bakari ari-te
heart-Acc e.o.-Dat comfort-give.Hon as three.years about pass-TE
'As they give comfort to each other, about three years have passed.'
(900: *Taketori Monogatari*)

The first usage of *otagai* with Accusative Case occurred in 1925 as in (92).[28]

(92) otagai-o kutujoku-si-awi…
e.o.-Acc humiliation-do-meet
'humiliate each other' (1925: *Taiyo*)

(93) otagai-o manzokus-ase

[28] I am grateful to Yoshiki Ogawa for informing me about these examples.

e.o.-Acc satisfy-cause

'satisfy each other' (1925, *Taiyo*)

Summarizing the observation up to here, we get table 1.

Table 1. Historical development of the *aw*-construction

759	V-*aw* (coextensive)
900	*Otagai-ni*
1642	*Otagai-ni* V-*aw*
1703	V-*aw* (reciprocal)
1925	*Otagai-o* *Otagai-o* V-*aw*

5.2. Analysis

In the previous two chapters, I have accounted for the diachronic structural change of the V-*te*-V construction and the *hazu-ga-nai* construction in terms of upward reanalysis advocated by Roberts and Roussou (1999, 2003). One might argue that *otagai* with Accusative Case became possible in accordance with auxiliarization of *aw* in 1925. However, a question remains as to why *otagai-o* was banned in other contexts as well until 1925. Furthermore, *aw* in the *otagai-o* V-*aw* configuration seems to preserve its role as a lexical category. Notice that a Dative argument can co-occur with *ogatai-o* in the *aw*-construction.

(94) John-to Bill-ga **otagai-ni** otagai-o naguri-aw-ta.
John-and Bill-Nom e.o.-Dat e.o.-Acc hit-meet-Past
'John and Bill hit each other.'

Therefore, the upward reanalysis approach seems not applicable to the *aw*-construction.

Instead, I will account for the diachronic fact in terms of syntactic constructionalization proposed by Ogawa (2014).

(95) Syntactic Construction

If a morphosyntactic constituent that dominates two or more morphemes (Y1, …, Yn, X) (n≧1, X = head) contains at least one variable Y_i, call it a *Syntactic Construction*. Y_i is qualified as a variable iff there are at least two candidates for substituting Y_i in combination with a particular head X. (Ogawa (2014: 137))

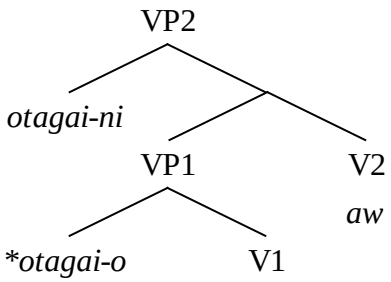
(96) Syntactic Constructionalization

When a syntactic constituent, which was not a syntactic construction at the earliest stage, becomes a minimal syntactic construction (i.e. which contains only one variable and one categorizer) at a later stage, and comes to have more than one variable and/or functional categories than ever possible enlarges the size of its syntactic constituent, in a unidirectional fashion, call the diachronic process *Syntactin Constructionalization*.

(*ibid.*)

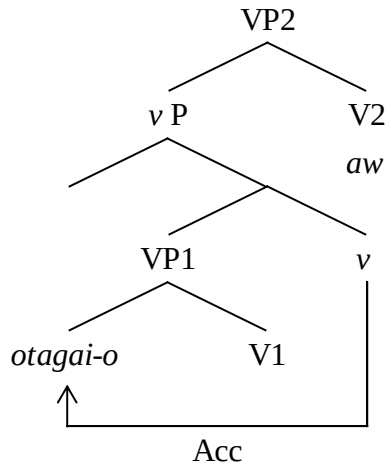
Suppose that in the beginning *otagai* was able to occur only in the following configuration, where V2 *aw* takes VP as its complement. Note that VP1 in (97) lacks *v*P layer; hence the Case feature on *otagai* cannot valued as Accusative.

(97)



Then, the structure (97) became more complex by syntactic constructionlization, projecting *v*P layer between VP1 and VP2. As a consequence, Accusative marking on *otagai* became possible as in (98).

(98)



6. Summary

In this chapter, I have focused on the peculiar binding nature of Japanese reciprocal anaphor *otagai:* it usually does not allow split antecedents, but allows split antecedents when it occurs in the *aw*-construction. I have provided a new syntactic analysis of the *aw*-construction. I have also focused on some semantic differences between *otagai* and the *aw*-construction and proposed that *aw* unifies plural events into a single coextensive event. Furthermore, from a diachronic point of view, I have revealed in which way the Dative/Accusative alternation in the *aw*-construction became possible. More specifically, I

have shown that *otagai* was able to be marked only for Dative Case until the 1900s. VP1 in the *aw*-construction did not project *v*P layer until 1925; hence the Case feature on *otagai* was not able to be valued as Accusative. In 1925, the structure of the complement of *aw* bemame more complex, projecting *v*P, and Accusative Case on *otagai* became possible.

Chapter 5. Conclusion

This thesis has dealt with complex predicates and Case alternation in Japanese. In particular, this thesis has focused on three types of complex predicates, the V-*te*-V construction, the *hazu-ga-nai* construction and the *aw*-construction. Using Japanese historical corpora, this thesis has shown how the usages of the three complex predicate have changed diachronically. More specifically,

I have shown that there are two types of historical change regarding the possible Case alternation within the complex predicate constructions. On one hand in the V-*te*-V construction and the *hazu-ga-nai* construction, some Case patterns which were allowed in the past become ungrammatical in contemporary Japanese. On the other hand, in the *aw*-construction, although Accusative Case marking on *ogatai* was not allowed in the past, it becomes possible in contemporary Japanese.

I have argued that these two patterns are related to two different types of diachronic structural change, namely, upward reanalysis and syntactic constructionalization.

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